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THE CALIFORNIAN.

VOL. I. OCTOBER, 1891. No. 1.

LOS ANGELES.

By Hon. E. F. Spence.

CALIFORNIA is new: there is nothing specially old about it; were it so we would have no hopes of its ultimate unparalleled prosperity. The fact that it is new inspires us with the hope, and imparts to us a faith, that ere long the State will stand out prominently as one of the most favored countries of the earth.

Biblical lands, as Egypt, Assyria and Palestine, and cities as Jerusalem, Damascus and Nineveh, are old and worthless, and by the discriminating hand of a marching civilization are cast aside, as the intelligent blacksmith throws the dross of his forge into the waste-pit. India and China are old, exceedingly old, and as a consequence are shunned by the adventurous modern as he wanders up and down through all lands, seeking a place where he may make a happy home. Even Europe, some portion of which we claim as "mother country," is becoming worn out and exhausted. Her soil is now and will in the coming years be more and more unable to respond to the demands of an increasing population.

To the close observer of to-day the signs of incipient decay are seen on every hand, and like a panorama, while we are gazing upon wasted and exhausted fields, there come into view monuments, castles, cathedrals and towers; works which the builders of the past deemed indestructible, gradually crumbling away. While we thus contemplate the condition of the older countries, we in turn naturally bring our thoughts to our own or the newer land.

The eastern portion of the continent, from Canada to Mexico, is slowly but surely losing a percentage of the people whose business has been to cultivate the soil. The emigrating trend of the American farmer is westward, and a deplorable fact is apparent that there is a growing tendency among the people to congregate in the cities. The inhabitant of a city rarely contributes much to the genuine wealth, sturdy growth or healthful advancement of a nation, while, on the other hand, the honest, intelligent tiller of the soil is the main-stay, the prop, the true supporter of the whole country, and woe betide that land and that people which do not fully appreciate and hold in proper regard the cultivators of the soil. As from the earth we sprung, to it we shall return, and, by its proper use, from it all good things are derived. The progressive farmer of to-day (and by the term farmer we include those engaged in all branches of soil culture) asks himself the questions: Where can I find a land that is profitable to live in; a soil that will yield me the largest returns for the least labor; a community refined and cultured, with educational

The Old Los Angeles Round Tower.

facilties of the first order, where wife and children will be happy and contented? And many other queries of a like nature will pass through his mind; and should he in his wisdom decide to make his home in Southern California, and more especially at or near Los Angeles, we believe that his heritage will be goodly and his lines fall in pleasant places. Our reasons for so believing may be briefly stated:

The design of this paper is not to be statistical, historical or personal; rather to reflect in a plain way the thoughts that occur to the mind of one who, in early life, untrammeled by the prejudices of section, politics or caste, sought and reached the coast of California with a fixed intention of making a home, taking all the chances of a pioneer life in a new country; and who has since crossed the American continent upon the various lines of travel from the Pacific to the Atlantic, from the extreme northern route—the Canadian Pacific, to the extreme southern—the Sunset; one who has crossed the Atlantic many times and observed the conditions of men and their home life in the intense rigors of Northern Scotland; the squalid wretchedness in Western Ireland; the stolid doggedness of the laboring classes of England; the careless and unambitious life of the French peasant; and the meek submissiveness of the natives of the Lowlands of Europe, where the man or the woman may be seen yoked with the donkey or the dog in harness drawing the same cart.

It is by making comparisons that we arrive at correct conclusions. Now the question arises, Is California really the best country for an industrious man to select for a permanent home? The writer would reply in the affirmative, and by giving satisfactory reasons would draw a picture for the mind's eye of this, the land of his adoption and choice. We have said that the country is new, for it is less than three hundred and fifty years since the first European saw what is now the coast of Los Angeles county.

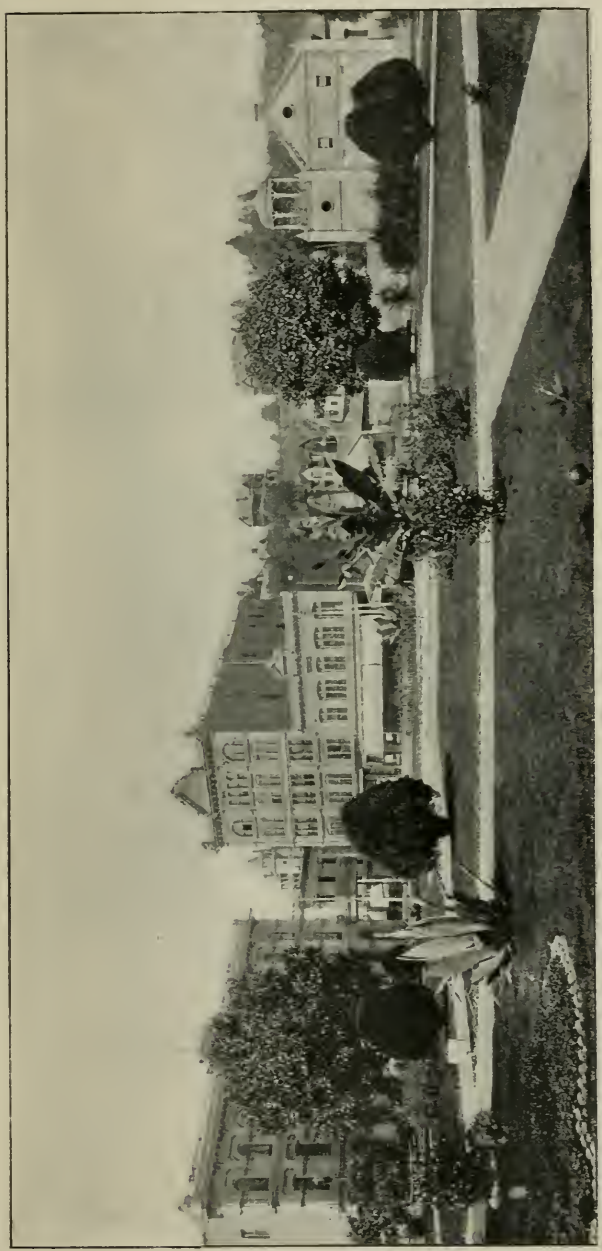
Only a few hundred years ago the California Indian had no one to dispute his title, or rob him of his heritage, or drive him to an early death by disease unknown to the aborigine. He roamed at will through the mountains, over the great plains, and sometimes camped by the shores of the great sea. Doubtless at times his spirit was as wild and as rugged as the mountains, and again may have been as gentle as the summer breeze that swept over his native plains; but the white

Chinese Lantern.

men came one by one. A ship filled with exploring adventurers and pirates reaches the coast. A sailor deserts, and still a few more leave the ship before she sails away. As it is an era of adventure and piracy other ships come coasting along, and thus gradually did the white men of Europe find a lodgment on the coast. It is pleasant to trace the van of civilization from the time the first European (a Portuguese) landed upon the Southern Californian coast until now, and watch the trend of the times. Then a sailor stood upon a cliff, and as his eyes scanned the plains and dis-

A Window in the Mexican Quarter. Photo. by Taber.

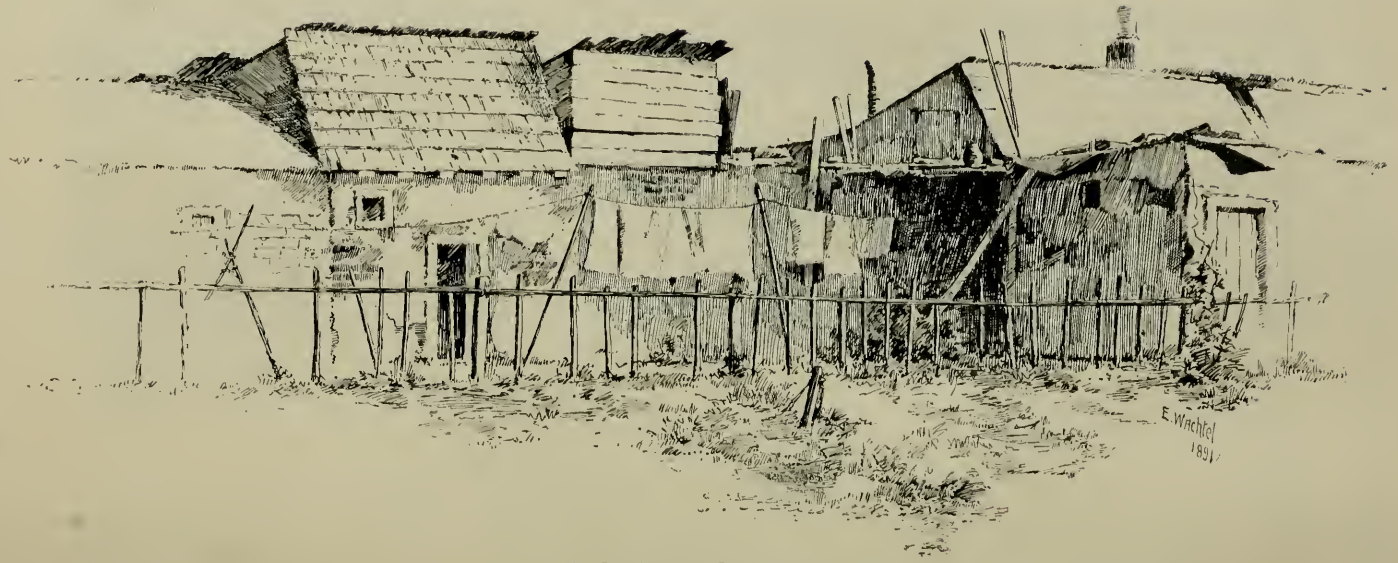
tant mountains, little did he dream of the riches that were hidden within the range of his vision. Not long afterward we hear of the Mission Fathers wandering unselfishly up and down the coast endeavoring to civilize, in some degree, the savages, and teach them, and tell them that there is a God in Heaven: and I wish to add a tribute to the memory of these men who first came at the risk of their lives to plant in California the banner of the Cross, the emblem of peace and good will to all, and by whose influence the wild man was comparatively tamed and taught to do a little work, no matter how crudely.



Plaza of Los Angeles.

Later on, as people came and increased, we find an admixture of races—Spanish, Mexican, natives, and traces of the Northern European—making a population of hardy men and women. The topography of the country, coupled with its climate, made it necessary for both sexes to be adepts at horseback riding. These people lived a somewhat nomadic life, as they owned flocks and herds and gave little attention to the cultivation of the soil. Some of the early American settlers in Southern California assimilated in a great degree with the natives, and made no attempt to develop what nature had so profusely strewn around them.

The political or governmental transitions from Spain to Mexico, and from Mexico to the United States, were of vast importance: and, considering the extent of the territory acquired and the immeasurability of the influences of such acquisitions upon the world at



An Old Adobe in Sonoratown.

large, it is one of the great wonders that the battles fought upon the soil have been almost bloodless. There has been no specially remarkable incident in her history, such as a Sedan or a Waterloo, to record.

About forty years ago some little sign of progress was given, as seen in the planting of a small area to citrus fruit trees and grape vines, and sending abroad for plants, seeds and shrubs of various kinds.

Owing to a natural growth, which at first was imperceptible, but later on was increased by the rapid advancement made by the northern portion of California, the cities of the South—Santa Barbara, Los Angeles, San Bernardino and San Diego—some twenty years ago began to attract, not only the attention of the American people, but the people of other countries, and a quiet, intelligent investigation has been going on since then. To the credit and profit of these cities and their environments, it may be said they have stood their examination well, and to-day they stand forth as solid, rich and progressive American towns and communities, with prospects as bright as is possible to be.

I wish to speak now more particularly of Los Angeles, the second city of California; and while I pay her a tribute, it will not detract an iota from the other and younger cities that are looming up richly, energetically and ambitiously. Ten years ago Los Angeles was still in a transition state, emerging from the old into the new order of things. Occasionally pretentious residences might be noticed, taking the places of the lowly yet comfortable adobe ones, where large and happy families were reared.

New streets were making where a little while before there were footpaths and tortuous windings around the rolling hills. Attempts were being made to have streets paved which were no better than common country roads. School-houses were being erected far in advance of those previously used. Members of the various religious denominations were considering the question of building churches, metropolitan in proportions and style. Owners of eligible business lots were arranging to cover them with respectable-looking buildings. Proprietors of suburban properties were cultivating and improving them, and the large landholder was actually rubbing the scales from his eyes, and his brain, that had long lain in lethargy, was becoming awakened. Some of the people were acting, some were thinking, while others were thinking it would be a good thing to act. Nearly all seemed imbued with the central thought that Los Angeles would ere long make a tremendous bound forward, owing to her proximity to the sea, her commanding position in the interior, her geographical place upon the railroad maps of the coast, her rich surroundings, and, above all, she had a certain class of citizens who believed in her future greatness, and were willing to exert all their powers to make her great and prosperous.

At this time many of the fine old adobes and ranches, that have since been torn down to make way for the onward march of progress, were in their prime, and the old round house stood to excite the wonder of the tourist. Sonoratown, that now is a mere curiosity, was then an important portion of the city and the home of many of the aristocrats among the Spanish inhabitants. To-day Sonoratown is one of the sights of Los Angeles; the artists find the old adobes picturesque, and in them many quaint objects are found, telling of the old days.

The above is only a meagre outline of the condition of things as they existed in 1880, when the United States census developed the fact that Los Angeles city had less than 12,000 inhabitants. The census of 1890, as enumerated by wards, gives us a population of over 50,000 within our city limits, while the solid suburbs extend in some directions far beyond those limits. It is not an unfair estimate to say that to-day, 1891, Los Angeles contains 60,000 people.

What shall we say of her present

position? What shall we say of her destiny? It were idle to attempt in a limited paper like this to describe the beauties and the advantages of Los Angeles city and county. It would be unfair to the reader to present anything that would even seem to be inspired by the spirit of booming or advertising, yet the factors that go to make the city and county so prosperous and so great are so many that a few only can be utilized.

To the stranger who leaves the East in mid-winter and glides down through the canyons into this summerland the change is marvelous. He finds a city in the center of a district calling to mind Italy; yet though the winter day is cool and crisp, and on some mornings a slight frost is seen, everywhere the land is green; the hills are carpeted with delicate tints of green and gold, the fields rich in growing grain, while after Christmas the wealth of wild flowers astonishes the beholder. Entering Los Angeles he finds a modern city, buildings that would be a credit to any city of the East; yet there is something strange about it all. It is the verdure that is tropical in all the term implies; every yard has its palms, bananas or other tropical trees and plants; tall palms catch the eye at various points. Here in an old-fashioned garden [see frontispiece] a lofty date palm rears aloft its graceful leaves, while its sturdy trunk is being covered by the clinging ivy, making it a most attractive spectacle, appealing to the lover of the picturesque and artistic. The streets abound in the graceful pepper, whose lace-like leaves and red berries are a characteristic and beautiful feature. Here the tall eucalyptus rears its plume-like form, while as for roses, Los Angeles is a bower. These gorgeous flowers creeping over the cottages of the poor and the mansions of the rich are suggestive of the prodigality of nature in this direction. The flowers blooming in midwinter, the rose hedges, fences of callas and other plants, that are treasures of the hot-house in the East, suggest a word as to the Los Angeles climate. To explain this so that it can be understood is most difficult, and it can be only said that the term winter here is a misnomer. True, it becomes cold; the peaks of the mountains are capped with snow and the mornings and evenings are cool; a roaring fire is often pleasant and an overcoat in the morning and evening is sometimes needed; yet in the Los Angeles garden the most delicate flowers are blooming, the garden vegetables are untouched. The winter is one for outdoor life, where the temperature rarely reaches the freezing point; the air is crisp and cool, a season of delight with nature at her best. Now is the time of rain, the storms coming upon an average once in two or three weeks, giving an average of twenty inches for the year. There is about fifteen degrees between the mean of winter and summer, an important point, telling of the lack of sudden change, that is so detrimental to the invalid. The best evidence that the Los Angeles winter is a remarkable one is shown in the hundreds of invalids who have come here and are distributed around the country in the various towns, enjoying the health lost in the East, but here regained.

Winter melts imperceptibly into summer—the dry time; the hills become gray, yet a crop of summer flowers appear in the fields and on the roadside, and the vineyards are now waves of green-bearing acres; the orange groves, the olive and the deciduous fruit trees are all rich in greens, hence the country, to a great extent, preserves its green tint here the year around. Warm days are experienced, but Los Angeles never suffers from the heat that is experienced in New York, Philadelphia or Chicago. During the summer months the thermometer ranges to lofty heights at rare intervals, yet in the shade it is usually cool and pleasant, and the nights are invariably so. Through the summer days a cool breeze comes in from the ocean, while at night a wind, soft and tinctured with the odor of upland pines, flows down from the lofty Sierra Madres, a life and health-giving tonic.

A Street in Chinatown, Los Angeles.

The stories of the old adobe town, the establishment of the Mission, the rule of the Mission Fathers, the conversion of the Indians, the battles between the natives and the gringoes, and the final surrender and adhesion to the United States, have been so often told that repetition is unnecessary. The reckless rollicking of the gay and daring Californian, his fandangoes, his wild horse racing and bull fighting are things of the past in Los Angeles. Certain activities incident to surrounding conditions tended to develop physical strength and endurance in horse and man, yet the necessity for such tests has, in a measure, ceased, and the old has given place to the new.

The inquirer asks how and why the change? In attempting to explain and reply we are forced to moralize a little. An aggregation of intelligence, modern "push" and unrest will generate a subtle power which will develop an intellectuality superior to any yet known. This power will be controlled by a liberality of thought and sentiment, a genial forbearance and toleration combined with a fixed and steady purpose to reach the acme of human achievements. The bright skies, the balmy atmosphere, the profuse productiveness of the soil and the all-pervading healthfulness of the surroundings tend to enlarge, broaden and deepen, not only the emotions and tender chords of humanity, but surely strengthen the main-spring of individual action, exertion and determination, thus imperceptibly fitting the mind of the South Californian to be the true living receptacle of that moral and scientific force, yet partly latent, but sure to be developed ere long with astonishing power.

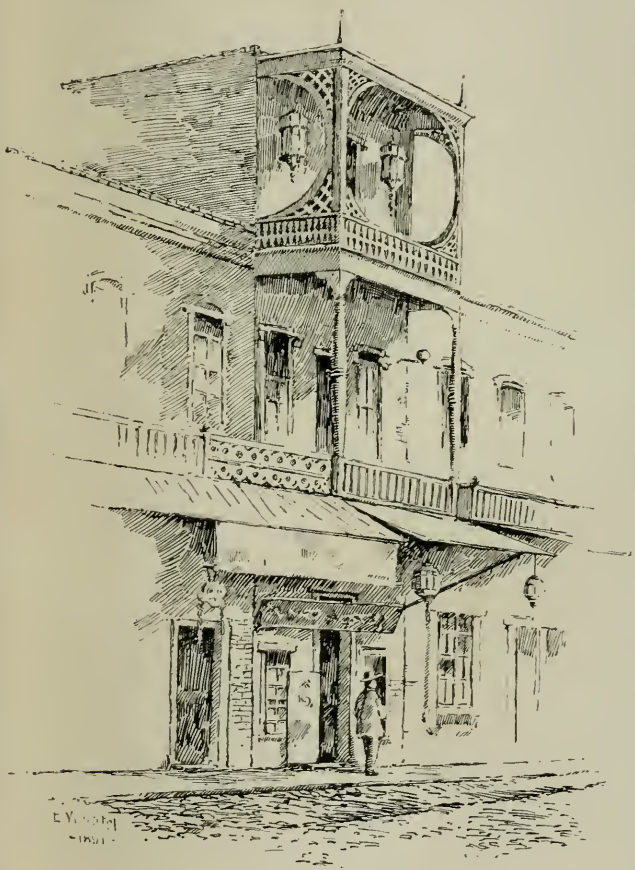
In our new Southwest even at the present time are found the forerunners of a wonderfully intellectual epoch. The course of the Star of Empire, civilization and population, has long been toward the West; but here on the bosom of the broad Pacific that star fades away, and here upon its shores the typical pioneer, the explorer, the scientist and the progressive American must stop because they can go no further. There is no field for them to the north or to the south, and backward they will never go. It does not require the ken of a prophet to foretell the result of the occupancy of a country by such a people. When cultured thought flashes against thought and cultivated mind against mind, the cobwebs of the past and the rust of the ages will soon disappear.

A single glance at a sign, somewhat conspicuous now, justifies the query, Will not the great seats of learning within the next quarter of a century be found upon the Pacific coast instead of the inhospitable shores of New England? And will not Los Angeles be a centre of advanced thought and progressive ideas, and in the mutations and revolutions of time will there not be a transference of the "Hub" from Boston to some city in the new Southwest, where the apple and the banana grow and mature side by side, where the tuberose, the calla and the heliotrope are unscathed by frost and the air is redolent with the fragrance of the magnolia and the orange blossom?

While the new Southwest already has gained a reputation world-wide for its unprecedented crops, the unbounded fertility of the soil and its almost unlimited capacity to support millions of people, and having all the elements to make an empire, still it will be more reputed as a country of commanding mind. Were speculation permissible here we might prognosticate the future of the city of Los Angeles; yet we prefer to leave that thought to the reader by suggesting that to-day she stands forth proud and peerless as the first city of the southwest, the second in all California. Her churches, schools and marts of trade would be a credit to any city. Her private buildings, streets and street railroads, horse, cable and electric, are fully abreast of the times.

The city hall and court-house are marvels of architectual beauty, and superior to those of any city west of the Rocky mountains. In former days

the principal part of the city was about the old plaza, upon which the Pico house and Mission fronted, and now in close proximity to Chinatown; but the city of to-day seems to be reaching out toward the sea; its suburbs being many miles to the south and west, containing fine avenues, magnificent residences, and many public parks



The Chinese Theatre.

that are fast becoming places of great beauty and interest.

As to the character of the people, the builders of the city, they can only be judged by what they have done, what they are doing and what they will do in the future. The residences of some of the citizens have already crossed the hundred-thousand dollar line.

While the great transcontinental railroad lines make Los Angeles an objective and terminal point, it would seem to be specially desirable for the merchant and the trader; yet to the lover of the beautiful a rare field is open. The mountains, hills, plains, valleys, vineyards, orchards and groves present a varied landscape that pleases the æsthetic eye, and on every hand elegant mansions are appearing, testifying to the enterprise and culture of the people. Los Angeles is essentially a city where the ideal home can be made. Nature is here at her best and in a few short months a home can be produced that the visitor would suppose had been years in attaining such perfection. Reaching out from the city on every hand are beautiful towns and suburban cities, as Alhambra, Pasadena and others, made up of the elegant homes of a cultured people.

Los Angeles is destined to become one of the most important railroad centers on the continent; the two great overland routes, the Atchison, Topeka and Santa Fe and the Southern Pacific now meet here, and rumors are in the air of other roads. From the city proper and its suburbs many lines reach out their network of steel, tapping the points of interest in the immediate vicinity. Los Angeles is but seventeen miles from the Pacific, where are found numerous resorts of great beauty, as Redondo, Santa Monica, Long Beach, San Juan, San Pedro and others, all reached by rail, many times a day. Turning to the mountains or the interior we find equal facilities. The Atchison, Topeka and Santa Fe extends through the San Gabriel Valley, reaching the towns of Pasadena,

Los Angeles City Hall.

Monrovia, Sierra Madre, Pomona, Ontario. A rapid transit line reaches Pasadena, then deflecting to the highlands of this city, known as Altadena, from which a mountain railroad is contemplated, taking the tourist to the summit of the Sierra Madre Mountains, where one may look down upon the City of the Angels as from a balloon.

The Southern Pacific Road extends through the lower San Gabriel, tapping important towns and cities; the Atchison, Topeka and Santa Fe with its new coast line carries the passenger from Los Angeles to the sea, skirting the Pacific and affording one of the most attractive trips in the country, reaching down into Lower California and San Diego. To the north another line carries the traveler through a country that calls to mind Italy and the choice resorts of the Mediterranean, reaching Santa Barbara and beyond, and finally to connect with the route that is reaching down from the north, making one of the finest coast and scenic roads in the world.

The seeker after climate is informed that people attain to greater age in this vicinity than anywhere else; at least such is the substance of a very learned and elaborate paper read in Los Angeles at the last annual meeting of the State Medical Society. The lover of adventure will also find congenial and inviting haunts, as in an hour's time he can reach the Sierra Madre range and plunge at once into the fastnesses of the mountains where the bear, the deer and the California lion are still roaming at large; and in two or three hours' time can visit the headwaters of the Sespe or Piru and introduce himself to the California grizzly. But above all, should this new Southwest be the "Mecca" of the honest, industrious working man who, by rightly employing his time, will soon find a home where he can live happily and contentedly with wife, children and friends, because nowhere else in the world is labor more generously rewarded or the intelligent tiller of the soil receives a readier or richer recompense. It is emphatically a land of "Corn, Wine and Oil," and while we thus speak of the benedictions received by us from the earth, we must not forget the great boon accorded to us by the distillations of heaven. The water that can be utilized is sufficient for all purposes to furnish power for electricity, for machinery and for irrigation. In fact, the advantages of a constant and ample water supply never can be estimated.

The mountain range that encircles the valley in which Los Angeles is situated, from the Tejunga on the west to the San Antonio on the east, is full of small, never-failing springs of pure water; and as the northern slopes of the range are covered almost with perpetual snow, we are assured of the permanency of as pure and delicious water as ever gushed forth from mountain's brow. In this range are located three great watersheds, the Los Angeles, the Santa Anita and the San Gabriel, which afford an ample supply to irrigate every acre from the mountain to the sea, and here is where the intelligent laborer and the scientist will be called upon to display some of their powers, in husbanding the resources placed within our reach by a beneficent Creator.

We have said that on this coast there will be the greatest strides in all those things that tend to make men better, and to push on the power of progress that the world has ever known. We believe it, but the coming generations must determine its truth or falsity.

Ἀνάγκη.

By Charles F. Lummis.

SHIRKING the eye of the desert skies
Under a juniper's sprawling shade,
Weathered and shaggy and swart he lies,
To sleep by the desert's breath betrayed.

The sun stabs down thro' a lonely rift
In fickle boughs to the sleeper's lids;
Their brown turns red, and the red as swift
Puffs livid grey where the hot brand bids.

The dull nerves nudge at the sleeping brain,
The slow brows knit to a sullen knot
As slumber limps with the load of pain
And rallies sense to the burning spot.

He cheats the sun with a stupid hand,
Groans, sits him up in the glare that blinds,
Nor hears the *h-h-h* of the warning sand
As a lazy length from the cactus winds.

Cursing the glare that has wakened him—
Wakened in time, if he could but know!
But ears are dullard and eyes are dim,
And Fate is pulling her puppet so.

Left-handed groping—ask Fate for why—
He reaches back for his fallen hat;
And death, that hurtless had passed him by
Had the right hand reached, is his share for that.

That slow S flirts to a mortal Q,
The castanet for the death-waltz plays,
The fist of a head unclenches to
A bony palm for the slap that slays.

A flash—a howl—and the smouldering brain
Flares up into white intelligence;
"My knife! But God! *It is in the vein!*"
And brute despair is the heir of sense.

Shrieking and cursing with lips that swell,
Raving and trampling his writhing fate,
His heels instinct with the rage of hell,
Each answering bite but a spur to hate.

Two thin, dark streams from his nostrils break;
He staggers—the ghastly dance is done;
And, one hand clenched on a frayed-out snake,
He lies lead-faced to the swollen sun.

CALIFORNIA'S OPPORTUNITY.

By M. H. De Young.

AFTER a fashion California has been widely advertised. It is known through the length and breadth of the land as a country possessing a wonderfully equable climate. Its remarkable agricultural productions have also attracted a great deal of attention, and created the impression that our soil is extraordinarily fertile; and we have enjoyed a degree of notoriety from Kearneyism and other causes that has helped to fix in the minds of many persons the idea that, after all is said and done, the Golden State is still a part of the wild and woolly West, with all the drawbacks peculiar to a raw, or, at least, an underdone civilization.

The World's Columbian Exposition may be taken advantage of by the people of California to remove this impression. By the aid of an appropriate and adequate display of our resources, and the extent to which we have developed them, we can teach outsiders that, although there is still room for expansion, we have made a beginning which will compare favorably with the maturer achievements of many of the older communities.

It would be a great mistake to underrate the influence of the impression that California is new and raw, which doubtless obtains in many sections of the East and the Old World, or to suppose that the erroneous impression is not widespread. It must always be borne in mind that it is the bad news which is telegraphed abroad, and that the exploits of a Black Bart are more dwelt upon by the Eastern press than the acts of broad-minded men who have established schools and universities, or the enterprises of citizens who have called into existence important industries.

I do not say this in a carping spirit. The methods of the Eastern newsgatherer differ not a whit from those of his Western brother. He lays before his public recitals of novel occurrences, among which stage robberies figure, and it is hardly to be expected that, every time he prints such an item, he should supply the explanation that California is a vast State, and that it does not follow, because a stage coach has been "stood up" upon some solitary road, perhaps a hundred miles distant from the nearest town, that lawlessness prevails generally. But occurrences of this kind, unduly emphasized, are responsible for the widespread opinion that our civilization is a trifle backward, and no one need be surprised if told that it is not rare for newspaper editors to receive inquiries whether we are supplied with good schools.

If, then, the idea that California is still in the wild and woolly state can be dissipated by an elaborate display of all of our material resources, we should eagerly seize the opportunity to make it. We cannot banish the impression by simply showing that we can grow large and fine fruits, raise big pumpkins and produce the cereals in abundance. Our display must be infinitely more various. It must be so thorough that the superficial, as well as the critical, visitor to the fair, will go away convinced that California is not only possessed of fertile soil and great material riches of all kinds, but that it has within its borders an energetic population which has made excellent use of them.

It is because I have felt that our chief aim should be "thoroughness" that I have so strenuously advocated a distributive exhibit. Having devoted much attention to the subject, I realized that any attempt to concentrate our exhibit under one roof might result in intensifying the idea that we were still raw—in the country fair stage, so to speak. I have, therefore, advocated that we put our best foot for-

ward in every department, and strive to carry off prizes wherever we can.

It would be a serious error to assume that our efforts would go unnoticed in the vast competition of the world. On the contrary, there is every reason for believing that we can make a creditable showing in almost every classification, and that in some we will stand pre-eminent.

In dwelling upon our wonderful development of the fruit industry, we are too apt to lose sight of the fact that we have made great progress in the mechanic arts. So little are we accustomed to referring to our exploits in this line, that the rest of the world has come to look upon us as merely an agricultural community, with all the limitations of a region devoted solely to farming. It is scarcely three months since the *Atlanta Constitution* seriously informed its readers that such was the case, and that we could never hope to attain greatness, because of our one-sidedness.

The Atlanta editor should not have made such a mistake, for the census report for 1880, had he consulted it, would have informed him that, while California stood twenty-fourth in point of population in the year mentioned, it held twelfth rank in manufacturing. The census figures for 1890 are not yet available, but if the rest of the State has made equal—I believe relatively it has been greater—progress with San Francisco, it will be found that our position has been improved.

At any rate, California will figure as an important manufacturing State in the census tables, but, as statistics of that kind do not impress themselves readily upon the average person, a far better idea of our progress in that direction can be conveyed by exhibiting, in their proper places, our great mining pumps, models of vessels, engines of all kinds, agricultural implements, our textile fabrics, our manufactured clothing, our boots and shoes, and the thousand and one objects turned out by our busy factories.

In the mining department we can convincingly demonstrate that the industry is by no means an extinct one, but that, on the contrary, it is growing steadily and surely. By this I do not mean to assert that the enormous product of placer mining days will ever be equaled, or even approached, but that by improved methods the yield of the precious metals extracted from our quartz veins will continue to increase, and that its annual value will equal an amount which some of the great agricultural States would not be ashamed to have stand for the product of some particular cereal.

Not only will we show that the business of mining is an industry intelligently and lucratively pursued, but we will also make plain the fact that we have a large variety of the inferior metals, all of which, when properly used, add to the comfort of man and the enrichment of the State.

In the same great department we shall exhibit our building stones, marbles, ornamental stones and quarry products generally. If pains are taken with this particular display, a stronger impression may be produced than with almost any other of our great resources. There is something fascinating about the country which produces in abundance marbles and other ornamental building stones. And when the story of production is accompanied by a recital of what has been done with the product; when we tell of the construction of ten-story buildings, whose principal feature is imposing columns and arches of marble, brown stone and granite, and whose halls are lined with beautiful slabs of variegated marbles rivalling the most famous colored products of the Old World, and rooms ornamented with onyx glowing with light and generous warmth, often surpassing in richness the rare productions of Mexican mines; when we tell this story, and point to the specimens to substantiate the truth, much will have been accomplished in the direction of dissipating the woolly West idea.

In the transportation department more well-directed efforts can be made to show how fully abreast we are of the rest of the world, and, in some in-

stances, ahead. When we display our cable cars, the fact will be made known that this excellent system of street locomotion was first put in practice in San Francisco, and that all the great improvements, which have contributed to the success of the cable system, are of California origin. We can show that the chief city of the State has the best system of street railroads in America, and, what perhaps will be equally astonishing, that many of our cities can give points to the much older communities of the East on the matter of locomotion.

In this department we can likewise show what we have accomplished in the ship building line. The fact that some of our best naval vessels have been turned out from San Francisco shipyards, if duly brought forward, as it is bound to be, will lift us in the estimation of that class—and it is a large one—which justly elevates to the first place among the efforts of man, a finished piece of marine architecture.

In the department devoted to showing live stock we can furnish another valuable lesson. No State in the Union can make better displays in this department than California, although our remoteness from the place of exhibition will put us at a disadvantage. The magnificent horses, bred on our stock farms, whose exploits are familiar to the whole country, will, at Chicago, come under the observation of immense numbers of people who will be forced to recognize that the ability to produce high-class turf horses, which conferred such a signal distinction on Kentucky, is equally shared by the Golden State, although the fact is often obscured by our many claims to other excellencies.

In the breeding of beef, dairy and other cattle, we have made equally great progress, and there is no question that we can hold our own with our most formidable competitors.

In the department devoted to education and the fine arts we can make our impress. Naturally a country so youthful as California cannot boast as great a number of artists as some of the older communities, but the divine spark of genius has fired some breasts, and their efforts will do us credit. Our painters of scenery have done work which will compare favoraby with that of their most gifted Eastern brethren, and California can claim at least two or three men whose work with the chisel is worthy the designation artistic.

But it would be impossible for me, in the compass of a brief article like this, to begin to enumerate all that we may do. When I study the official classification I am amazed to discover how few groups or even classes there are in which we cannot make a creditable showing. Indeed, I am convinced, if there is no relaxation of zeal on our part, that we shall be able to draw attention to ourselves in nearly every one of the one hundred and ninety-three great groups into which the thirteen departments are divided. If I am right in this assumption, then our advertisement would be continuous, and not confined to a single building, as it would be if we had made the mistake of attempting to collect under one roof—something absolutely impossible of accomplishment—all of the displays of our State.

To illustrate my idea I may call attention to the fact that one of the great groups in the department of agriculture is that of forest products and forestry, embracing nineteen different classifications. To adequately display all of the productions and appliances which will come under these groupings, annexes, in the shape of sawmills, etc., will be required. These will be sure to attract all of the large class specially interested in such matters and, in addition, that equally large class of curious sight-seers who love to watch machinery in motion. Obviously, if California failed to display her productive wealth of forest products in this place, she would lose a splendid opportunity to advertise this particular resource. But if she acts judiciously, and dares to show what she has to show in this particular line alongside of the products of States whose chief boast is

their great lumbering industries, she will be sure to achieve a signal triumph; for nothing so affects the human mind as variety. The people who only expected California to excel in fruits and viticulture will be amazed to learn that the State has great forests of excellent timber and a variety of woods, suitable for decorative purposes, which cannot be found in any other State of the Union.

The same impression may be created in other groups of the agricultural and other departments. Everywhere the visitor wanders he should see California represented in some shape, until at last he comes to realize that, within the boundaries of the State, whose area is 157,801 square miles, nearly everything that man desires or needs is, or can be, produced.

The carrying out of this idea does not necessarily embrace the abandonment of the proposal of a State building in which an effective display shall be made. On the contrary, it would wonderfully increase the interest in such a collective display, for every exhibit in the competitive departments of the Fair would be a finger-post directing the visitor to the State building to acquire fuller information regarding the capabilities of the State.

The contents and arrangement of the collective exhibit in the State building should be the subject of intelligent care and anxious solicitude. An earnest endeavor should be made to embrace in it every known product of the soil, mineral and vegetable, and no attempt to include manufactured products should be considered. When the infinite variety of our natural products is considered, it will at once be seen that the space required for their proper display will be enormous, and, as our chief aim is to show what California can do, it would be unwise to a degree to devote any valuable room to exhibiting articles not peculiar to the State and in the production of which we show no particular superiority over our neighbors.

I do not mean by this that the collective exhibit should entirely ignore our capabilities in the manufacturing line. That will not be necessary, as abundant literature can be furnished which will fully inform the curious of our progress in the mechanic arts. Besides our best efforts will be represented in the various classes of the groups in the great department and will speak for themselves.

The main object of the collective exhibit should be to display in a condensed form every natural product of the State and to afford as nearly as possible a graphic history of the development of the soil so far as it has proceeded. A leading feature of the exhibit should be a topographical map on an extended scale showing the mountains, valleys and rivers of the State. On this map could be laid down the mineral regions in such a fashion that the observer could at once distinguish the nature of the mines, if any have been opened, and the general geological characteristics. Our great forests of redwood, pine, and sequoia should be indicated and the vastness of individual trees, as well as the quantity of timber still standing. Our great agricultural districts should be shown with the boundaries of settlements already made and those portions of the State particularly adapted to citrus or other fruits designated. The range of temperature and rainfall of various sections could also be easily shown, making the map particularly valuable from the climatic standpoint.

As California has made such wonderful progress in irrigation and is rapidly convincing the rest of the world by its experience that it pays to be as independent of the caprices of the elements as possible, a comprehensive showing of what we have done in this direction would be both instructive and interesting. Models of irrigation ditches and lands made productive by the aid of water should be furnished on an extensive scale, and good photographs illustrating every phase of irrigation should be exhibited and an abundance of literature on the subject provided.

Our great variety of woods suitable for building and decorative purposes should be shown in the rough and in

the finished state. If possible, models of houses showing our woods and the uses to which they can be put should be supplied. There might also be specimens of interior decoration in native woods in the shape of panels, etc., and, whenever practicable about the building, California lumber and decorative woods should be used. Specimens of our big trees should not be absent from this part of the collection.

California building and decorative stones ought to have a prominent place in the collective exhibit, and the exercise of a moderate degree of ingenuity no doubt would permit their employment in different portions of the building. For instance, some of our beautiful onyx should be used in the construction of a conspicuous chimney piece, which might be designed by California artists. There could be columns of our pure white marbles and of our beautifully variegated specimens of the same stone. Models could also be usefully employed here to illustrate the use to which our stones are put and their number might be shown by some such device.

The fact that California is still a great mineral country could be shown by transporting bodily all that portion of the State Mineralogical Bureau's collection that pertains to California. It would make a complete showing, and more thoroughly demonstrate our mineral wealth than could be done in any other way. Models of mining shafts, mills, etc., and methods of working should form a leading feature of this part of the collection, but its principal object should be a vast pyramid representing the cubical measurement of the gold taken out of the soil of California since the occupation by Americans.

It is hardly necessary to urge that our agricultural exhibit should be complete in all particulars. We have been so accustomed to dwelling upon the prominence of this industry, to the exclusion of all others, that I have always deemed it necessary to suggest that our great agricultural possibilities should not blind us to the fact that we have a great variety of other resources. The probable trouble in this particular branch of the display will be to decide just how far to go. Some things, however, will have to be done. We must show what we can do in the raising of cereals by displaying specimens of our wheat, corn, barley, rye, etc., not only in the grain, but in the stalk. Every variety of vegetable grown here should be exhibited, and care should be taken to secure worthy specimens.

In the horticultural portion of the display should be included an elaborate array of our choicest fruits, done up in attractive glass jars, dried fruits, fruits of every variety in tasteful but showy parcels, our best raisins, crystalized and preserved fruits. Unquestionably this display, together with the displays of constantly renewed specimens of fresh fruits, will be the leading attraction of the exhibit. Therefore the most study should be bestowed upon it in order to achieve the best results.

In floriculture particular pains should be taken to keep up a steady supply of fresh flowers. We should also show every variety of preserved flowers and, in the way of decorations, as many specimens of semi-tropical plants as possible, in order to impress the visitor with the idea that our State has a distinctive and superior climate.

The viticultural display should be large enough to show the importance of the industry of wine making, and it could be made highly interesting with the aid of working models of vineyards and wineries.

But, above all things, a garden under glass should be provided, in which every tree and plant susceptible of profitable cultivation or for pleasure should have a place. Such a garden, with an occasional fountain fringed with orange, palm trees, evergreens, and all the infinite variety of plants familiar to us, would be a dream to most of the visitors of the fair, and make a lasting impression upon them.

I have here enumerated only such of the salient features as have occurred to my mind. To be thorough would re-

quire one to traverse the whole of the elaborate classification of the departments, for, if we do all we are able, we will make a display on a condensed scale nearly as comprehensive, so far as variety is concerned, as that of the great Fair itself.

If this collective exhibit is placed, as I am confident it will be, in an attractive building whose architectural peculiarities will draw attention, and is comprehensive and well arranged, it, in conjunction with the other exhibits, will finally and conclusively remove from the Eastern and the foreign mind the damaging impression that California is still a border region, and convince the world that in all things we are well abreast of civilization, and that our only peculiarity consists in the fact that we still have ample room for great numbers of people to form for themselves happy and prosperous homes.

THE SKYLARK'S SONG.

By Herbert Bashford.

THE feathered fir is bathed in dew,
And countless gems are clinging there;
A joyous lark amid the blue
Sends rippling music down the air;
And when on boughs that droop apart,
Each bead of crystal pulses bright,
His song has touched the dewdrop's heart
And made it quiver with delight.

THE REMOVAL COMPANY.

By W. C. Morrow.

IT is hardly strange that my best and oldest friend, widowed and dying, should have given into my charge her little daughter, Annette, for there was none other so strongly bound to this obligation, none toward whom that gratitude which lives beyond the grave extended a hand of gentler appealing. Nor did it seem at that time so serious an undertaking. Annette was sweet and gentle and quiet and obedient, studying my wishes and trying to follow their course, seemingly putting aside her own great sorrow in my presence and investing her demeanor with the full strength of her brave young heart. I knew little about children then, or I should not have been blind to the womanly conduct of this strange child. Now I have some idea of her suffering, which she kept so bravely from me, of that consuming yearning with all her childish heart for the touch of a mother's hand and the music of a mother's voice; and I know now how greatly she needed the kindly guidance of a level purpose and an even heart.

I thought I was doing the best I could. I imagined that the responsibility of the charge found proper estimation in my plans, in my conduct, and in my wishes. If there was a sense of oppression under it my gratitude would have masked it. So, being too young and unsettled to establish a household with Annette as my family, I put her in a convent. It never occurred to me to imagine that this sharp separation contained any element of a riddance, nor did there come up any formed hope that Annette, so desolate and lonely, so gentle, unselfish and retiring, might choose to become a conventual, upon which consummation my responsibility would cease, of course. When I spoke to her of going to school in a convent her sad face brightened, and then instantly it fell.

"What is it, Annette?" I asked.

"I can never see you then."

"Oh, yes," I said, "for I shall go to see you every week."

She looked up at me quickly. "You will come *every* week?" she asked.

"Yes; every week."

"Because," she added—but why did she use that word "because?" of what was it an explanation and for what a reason?—"because," she said in her sweet, low, childish voice, slightly tremulous, "you are all I have in the world."

I caught her up in my arms and kissed her for that, and this surprised her very much, for it was the first time I had ever caressed her, but that was because I knew so little about children. She went to the convent, and the years of her life began their steady course — with what loneliness, with what suffering, with what longings, with what numberless little cares and anxieties, with what small pleasures and diversions I did not know, for Annette was reticent, and it never occurred to me to inquire. My promise of visits suffered many violations, but my brave little girl never complained. There was always the same quick but transitory happiness which lighted up her pretty face when I would visit her; but there was otherwise a habitual sadness, growing deeper and surely merging into melancholy. And to my surprise she refused religious comforting—not that I was religious, but—I really did not know why her refusal troubled me. At times she talked sparingly but fearlessly a philosophy which made the good women there despair; these things they told me with concern.

The time came when I awaited with anxiety the day of her graduation, now close at hand, for responsibility

at last had laid a hand upon me; its effect upon an erratic bachelor, not old enough to be Annette's father, was disquieting. Was there any element of selfishness in this feeling? Had I been a churl in failing often to visit Annette?—for when I did go I always took her some little present, and she was grateful for it. Could I not have gone oftener and taken her more presents? Could I not have staid longer and been gentler and kinder to her, and told her things of the outside world to cheer her? Thus ran my thoughts, quickened possibly by conscience, as I sat in the very rear of the great room on graduation day, well concealed, I thought, by the large crowd present. Thus ran my mind as I sat and gazed in wonder at my Annette (for was she not my ward?) as she sat upon the platform with other girls. Could this beautiful girl be Annette? It must be, for she was so small, so fragile, so pale, so invested with an atmosphere of loneliness. In all that great room filled with people I saw only my little Annette; and never had I seen so pretty, so dainty, so exquisite a picture. I was glad she did not see me; I would let her know afterward that I had been there, and this would prove that I had not neglected her. She held the flowers which fortunately I had thought to send her, and her manner showed that by some accident I must have sent the kind she liked best; for in very truth I had ransacked San Francisco before I found any that I thought were good enough for Annette. But what meant this new look of trouble in her face? It appeared to be evidence of a tangible pain. A fear that the excitement had proved too great for her possessed me, and a strong pity was aroused. There was a strained expression in her eyes, whose glance wandered unceasingly over the vast audience, up and down, row by row, face by face, until the radiance from their unfathomable blue depths fell full upon me; and then instantly a bright flash of recognition, followed by a soft pink flush which rivaled the dainty coloring of her roses, swept over her face, and then a faint smile of pride and happiness, and her glance fell to the floor. At that moment there burst upon me unaccountably, with so fierce assailing that it stunned, the realization, all unexpected, all unguarded against, that my little Annette was a woman.

It was some days before I could recover full possession of myself, for by some unexplained means I had been thrown into a condition of wilder disorder than was customary even with me. Vaguely was Annette associated with this condition, and with a certain impatience I felt a resentment toward her—toward innocent, unhappy, unselfish Annette; and it added somewhat to my resentment to reflect that she was now eighteen, and beyond the legal reach of my protecting guardianship. It is true, she had no means for her maintenance, but I should not grudge her that from my modest earnings. This charge upon my income doubtless would keep me from marrying and having a home with all its sweet comforts, but was Annette to blame for that? and did this weaken the force of my obligation? And then, she might marry or become self-sustaining ——. But at that moment the following note was brought to me:

"My Dear Guardian: You have not been to see me since the day of my graduation, but I am glad to know that you have not been ill. Perhaps it is better that you did not come, for I know that I should not have had the courage to thank you for all that you have done for me. How can I thank you now? Every word, look, and act of kindness from you through all these past years will remain a precious recollection.

"Pardon me, my friend; but I can live no longer upon your bounty. I am a woman and of legal age, and my first right and duty are to maintain myself. Knowing your generosity and unselfishness, I must not let you know whither I go, but if all goes well with me you shall know.

"Farewell, by best, my dearest friend. Annette."

The blow was swift and cruel, but above all other feelings there struggled to the front one of bitter chagrin. So Annette had run away from me; so, after all, it was proved that I was nothing to her, and that now, when she was armed to make her own fight for life, she had no further use for me; so, she believed that my friendship was worthless, my guidance and assistance useless; and thus Annette had shaken me off as an ugly dream, leaving me bruised, humiliated, cut to the heart.

As the days passed by my resentment softened, and then there came upon me a fear that Annette's mind was deranged. Sometimes long ago I feared it, but not expected it. If I should find her with her mind awry, my duty would be clear; but if it should be otherwise how could I thrust my presence and friendship upon her? Her conduct had been a sufficient hint. The weeks passed, and my fear for her safety grew steadily. It looked bad that not a word had come from her. San Francisco was hardly large enough to afford absolute concealment, but it was large enough to starve in. How could Annette, with her dainty tastes, shrinking disposition and fragile body earn a livelihood there? Would she rather starve than be near me?

My fears finally impelled me to make a search, and for this purpose I employed a man named Greatwood. "I do not wish to see her," I instructed him, "nor does she wish to see me. If you find her tell her nothing, but report to me."

It was a harder task than I had imagined, but one day Greatwood came to me with a strange expression on his face. "I have found her," he said, "and she is in a very bad situation."

"Tell me about it, Greatwood," I begged, for his words gave me a quick, measurable pain and a great eagerness.

"Well," he said, "she has been sewing and trying to teach, but she was not strong enough, and her health broke down. It is a wonder she has lived so long. The people in the house have been kind to her, but she refuses to accept food from them, protesting that she is not in need of it. Matters reached a climax only last night. Some one heard a strange noise in the room —a very slight sound, but sufficient to attract the attention of a nervous woman in an adjoining room. She roused her husband, and they went to the girl's room. The door was locked; there was no answer to their calls and rapping. They burst open the door ——"

"Is she still alive, Greatwood?" I gasped, springing to my feet.

"Yes; but they found something worse than her attempt."

"What was it, man?"

"She was starving."

"Come, Greatwood," I cried, "take me to her."

"But you said——"

"Come—there is not a moment to lose."

We went as fast as horses driven furiously could take us. Oh, what a shabby, wretched place for Annette, and the poor, bare room in which she lived! I went straight to the bedside and gently raised the slight, emaciated form of my poor Annette—*my* Annette, I say—and pressed her to my heart. She knew me, and feebly put her arms around my neck—the first time she had done this in all her life.

"I didn't think you would care to see me," she faintly said, and tears of happiness streamed down her wan cheeks; and there came into her beautiful blue eyes just such a look as that which lighted them up on the day when she found me in the great crowd at the convent. The doctor who had been summoned that night to attend her had left an injunction that she be given a broth; but the women there told me that she had refused to take it. I ordered another at once. Annette watched me all the time, but said nothing, and her tears continued to flow. I was sure that I tried very hard to be kind and gentle with her. I said little, because she was very weak.

I gave issue to not a word of chiding —how could I? But for all that there must have been something in my manner that disturbed her, for she soon became restless. What was there lacking in my conduct? Was it sympathy? Surely I felt it with all my heart. It is true, I could not forget Annette's past treatment of me—not that it should affect either my sympathy or my sense of duty, but that it indicated her dislike of my care and attention. I felt that I was guilty of a rude intrusion upon her now; for I was interfering in a matter that lay wholly between her and her Maker; and I found in her desolate condition a sufficient explanation of the fleeting happiness which she felt upon seeing me. This had worn off quickly enough, but not sooner than I had expected. Even before the broth arrived my presence had apparently become a positive annoyance to her. I offered her the broth. She shook her head. I pleaded earnestly with her. Her look hardened all the more.

"But you must, Annette," I said.

Her eyes flashed with a quick look of defiance.

"No—come closer. Send the others away; I want to tell you something. . . . You are and always have been very kind to me . . . much kinder than I deserve or have ever deserved. . . . I can never repay you, because . . . I shall not live long enough."

"Annette!"

Her eyes brightened and a flush came into her deathly pale cheeks.

"It is true," she said, speaking more rapidly—"it is true. I am determined to go."

"What do you mean, Annette?"

"You know what I mean," she gasped, struggling to raise herself upon her elbow. "You know what I mean."

I knew then, for even if her words had failed to convey her dreadful meaning, the resolution in her beautiful eyes would have been sufficient information.

"You know what I mean," she repeated, "and it will be worse than cruel in you to interfere."

In spite of my philosophy; in spite of my belief in those unhappy days that the right to take one's own life was inherent, sacred, and inalienable; in spite of my conviction that none had the right to interfere and that all would better be dead than living; in spite of my opinion that among all those whom I knew—the sore afflicted, the deranged, the unhappy, the abandoned and desolate—none could find a happier release in death than my poor Annette,—in spite of all these things my heart seemed to die within me when a full realization of her terrible determination broke upon me. For my conscience was alarmed, and the memory of neglected visits and other attentions and kindnesses was aroused into unhappy activity. Possibly I could have made her life brighter and kept at bay the gloom and sense of loneliness that had become despair.

But what could be done? I knew that Annette was proud, and that the end of all things with her had come. Despite her generous effort to show appreciation of the little that I had done for her so meanly, I saw that my presence was irksome and my influence an evil. What could I do?

"Annette, do you not think it is wrong to do what you contemplate?"

"Ah, yes," she replied, sinking back upon her pillow and covering her face with her hands.

"Then," said I, "you know you should not do it. I don't wish to dictate to you or preach a sermon, but let me assure you, Annette, that violence to conscience is unnatural and unholy, and that it is unworthy of you. Think well, my child. . . And if I do not seem indelicate—how can I say without wounding you, Annette, that you need not fear the lack of such friendship in substantial form as I am able to give you?"

There was a long silence, and I knew that she was sobbing. Hope quickened within me, only to be strangled at once, for Annette brokenly said this:

"I appreciate your kindness and

thank you with all my heart, but—but—I am determined."

Should I resort to harsh measures to restrain her? That would be mean and cowardly. . . Annette must go. . . That deadening realization forced itself upon me. . . I would not interfere with the exercise of a right which I considered sacred. . . Only one thing was left for me to do—I must be a friend now.

"Annette," said I, "if you have the strength to listen to me I will tell you something very strange, and suitable only for the ears of those who contemplate the end with the willing mind of one anxious to accomplish it. It will not save you to me, but it will save your conscience to you, and your wish will be gratified without outrage to your sense of right."

Annette fixed a very earnest look upon me.

"I don't understand how that can be," she said.

"You are too weak. Take some of this broth, and then I will tell you a thing exceedingly strange and of the deepest interest to you."

With surprising confidence in me, she swallowed the broth, and its good effect soon became manifest; and when a little color had come to her cheeks and a healthier brightness to her eyes, I told her substantially the following:

"I have a friend named Reiferth, a German of about my own age, and he and I have the same ideas concerning the matter that is in your mind. Now, as a fear of punishment in a future life deters many from committing the act who would be better off if not so restrained, Reiferth conceived the idea of forming a company which would undertake, for an ample consideration, to remove from this life, without inflicting pain, those who earnestly wish to go but fear to take the step for one reason or another, and who will submit themselves to the company to do for them what they fear to do for themselves. I refused, much to Reiferth's surprise, to become a member of the company; whereupon he charged me with inconsistency, and maintained that the purpose of the company was wholly noble and humane. I believed that it was, but I did nor desire to embark in such an enterprise. Reiferth then declared that, knowing the scheme to be unlawful and its practice attended with the gravest dangers, with the penitentiary or the scaffold a constant menace to its success, I was afraid to become his associate. I made no rejoinder to that charge. Then Reiferth asked me to help him if it should come in my way, and I promised that I would. Reiferth put his plan in operation in the very heart of San Francisco, and there is evidence that he has prospered amazingly.

"Annette," I said in conclusion, "I offer you this opportunity for accomplishing your purpose without doing violence to your conscience. What do you think of it?"

[I have no desire to justify myself in this matter, nor to deny the right of criticism which the unusual position here advanced may invite; but while I know that the scheme here proposed may be denounced as but a form of suicide, and that its acceptance would bring all the penalties supposed to attach to that act, I have to say that I see little difference between its essence and that of knowingly acquiring habits and following practices which lead to the same result. It was important in this case that I impress upon Annette the idea of avoiding outrage to her conscience.]

Annette had listened with an interest that absorbed every faculty; and when I had finished she sat upright in great excitement, and somewhat to my dismay she said:

"Do you know where the place is?"

"Yes."

"What is it called?"

"The Removal Company."

"Will you take me to it?"

"Annette,——"

"Will you?"

"Immediately?"

"Yes; now."

"You are not strong enough, Annette."

"I am perfectly well." she responded, springing to her feet and commencing a few preparations.

With a heart so heavy that it almost dragged me to the floor I left the room and found my carriage still waiting. I went upstairs again, and Annette at once took my arm and walked firmly down to the street. So strange a numbness possessed me that I hardly believed I was in my right mind. In the carriage Annette, who was now all eagerness and activity, saw that something was wrong with me."

"Why," she cried, "you are ill!"

"I think not, Annette."

"I am taxing you too greatly—I am asking too much of you, . . but it will soon be over."

We arrived at the quarters of the Removal Company—a silent old brick house, with little exterior sign of occupancy. It was not far from the long warehouses that lie under the afternoon shadow of Telegraph Hill, and was in one of those districts which a vagrant fashion of migration had left a mere trace of former enterprise. Within the house all was brightness and modest luxury. Reiferth was a man of taste. He welcomed us very cheerfully. "I am sorry to see you ill, though," he said to me. He had a kind and gentle manner, and he handled with the utmost tact and delicacy the business in hand. I was hardly able to stand when Annette advanced to bid me farewell. Tears were in her eyes and she was pale, but her determination was firm and her courage unflinching. She took my hand and looked up into my face long and searchingly. What sought she there, if anything?

"Farewell, my friend," she said in a clear voice and with infinite tenderness.

"Annette,——"

But she stopped my words by throwing her arms around my neck, and before I could realize anything she had fled my presence, going with Reiferth to another part of the house. As soon as I could order my understanding I followed, but the door by which they had left was locked. No longer could I stand; an unaccountable weakness seized me, and I sank into a chair. There I sat an indefinite time in a stupor, and was thus sitting when Reiferth returned.

"Well?" I gasped.

"It is all over," he said kindly. Then he quickly brought me some brandy, which he made me drink.

"Where is she?" I asked.

"Upstairs."

"May I see her?"

"Why—no. I—I—don't think you ought."

"But I wish to."

After some further demur he yielded. He supported me up the stairs and into a room. On a lounge lay Annette. At the door my heart had bounded with gladness, for she appeared to be only sleeping; but when I had come nearer—I cannot write of all these terrible things even at this great distance of time. I had come to bid my poor Annette farewell now, for I could not, I could not in life.

"Please leave me, Reiferth," I begged.

When he was gone I took the slight body in my arms and pressed it close, very close to my heart. I covered the white, dead face with kisses. I kissed her hair and her sightless eyes, once so beautiful, and caressed the poor sunken cheeks.

"Ah, Annette," I cried, "my own little Annette, *my* Annette, I can tell you now what I have learned this day—that I love you; that I love you with all my heart and soul, and have loved you thus since the day when you sought and found me in the great crowd at the convent. How blind and foolish I was, Annette! And now you are gone, and my heart is broken."

Reiferth came and took the poor dead body out of my arms and kindly led me away. My poor Annette!

More than a year had passed, and I was standing listlessly on a street corner in Philadelphia. I could not live in San Francisco, for everything

there was eloquent with the memory of Annette. Darkness was approaching rapidly. I still stood, with that same dull pain which came upon me when Annette started down stairs with me to the carriage. The night was coming on cool wings, but its presence was soft and gentle. There was a shy touch on my elbow, and when I looked around I saw a beggar. She was small and slight, and was dressed in faded black. A black straw hat, with poor, cheap, faded lace, shaded her face from the street-lamp.

"Will you please give me a little money, sir?" she pleaded. "My husband has gone away, and I have nothing to eat, and my poor baby is starving."

It was not the voice alone that came to me out of infinite distance; there came crowding with it a thousand memories and all the anguish of a blasted life. I was a broken man, carrying existence heavily, but the eagerness which surged up within me swept aside all the torpor of my being. Some strange movement must have alarmed the woman, for she quickly raised her face . . and there was not a trace of recognition in her eyes.

"Annette!" I cried. "You know me—your guardian—your old friend, who reared you from infancy—Annette!"

"I—I don't know you," she replied, with pitiful fright. "I am not Annette—I never had a guardian"; and honesty shone luminous in every word.

"But you *are* Annette," I protested, aghast, "and you must come with me."

"No, no!" she cried, with worse fright still; and then she turned and ran away.

I would not let her go so easily. I sprang forward and caught her, and held her firmly.

"Do you hate me so much as this, Annette?" I asked with angry and unreasoning bitterness. "Tell me so, and I will let you go."

"I don't hate you—I don't know you—you are mistaken. Let me go. I am afraid of you. I will cry out, and you shall be arrested."

I released her, and she hurried away. Was there really some dreadful mistake? Was it possible not to be certain of that low, sweet voice, those beautiful eyes (now strangely dull), that look of indescribable sadness, that small frail form, those exquisite graces of pose and movement? But if it were she, how could she, so honest and innocent, so much a stranger to deceit, conceal her surprise upon encountering me, and how assume entire ignorance of me? Here was a strange mystery—or—had I gone mad and taken to finding Annette in shadows? I glanced after her, and in the distance saw her hurrying along, fear lending fleetness to her step. Had I forgotten that Annette was dead?—but would not even her spirit know me? Without a thought of what I did I hurried after the flying form, which distance and darkness were absorbing—I would not lose Annette again. I went forthwith in pursuit, holding my pace within the necessities of its mission, getting a firmer hand upon my eagerness, and looking to the ordering of my purpose; for if ever a man needed to be bold yet cautious, firm yet gentle, fearless in strange, dark perils and reliant upon the evidence of his senses, that man was I. Enough had come forth already to distract my faculties; but Annette, dead or alive, had stood before me, and I would follow her now whithersoever the love which bound me to her might lead.

Without once having looked back, Annette arrived in a dark street, slipped quickly into a door, and in a moment a tall, ugly house had swallowed her up. I was now close behind her. I tried the door. She had bolted it. I rushed upon it madly, burst it open, and sent it flying against the wall with a crash that resounded throughout the depths of the house; and as I did so I saw Annette—for I must call her so—clearing the top step. She turned and saw me, and fled with a cry. Never bounded a deer with swifter leaps than mine. I was close

upon her in a dimly lighted hall, when she flung open a door, cried "Mother!" in a choking fright, and as I pushed into the room threw herself into the arms of a strange, sinister woman, wrinkled and bent with age. There the poor girl, her face buried in the woman's shoulder, sobbed and gasped and trembled in a very agony of fear. In a moment a powerful man of middle age came hastily into the room behind me, and stepped to one side to see me better. Other men followed him—men with dull, vacant faces, whose blankness would have impressed me at another time; but through all these faces and circumstances, through the turbulence of my emotions and the fierce energy of my purpose, there arose and stood forth the fact that this strong man and I were enemies—that between us two lay the settlement of this affair, and a dark pit yawned for him who should fall. He was the old woman's son; thus spoke his sharp eyes, somewhat dulled with drink, and his high cheek bones, like hers; the pose of his head and certain tokens of manner—all a copy of his mother's; but where coarse and brutal in him, sharp and cruel in her. Upon his body he wore only a woolen shirt, open at the breast, the sleeves rolled up, and upon his lower limbs coarse trousers.

"Well," said the man, his voice deep and his manner menacing, though betraying a puzzled mind, "who are you an' what yer tryin' to skeer them women to death fer?"

Annette, controlling a sob, raised her face upon hearing his voice, and looked at him gratefully.

"Joe," she said faintly, "I'm so glad you are here. You won't let him hurt me, will you, Joe?"

"Not as long as them hands kin close up a windpipe," responded the man, making a significant prehensile movement with his fingers; "but I don't think nobody wants to hurt yer, Bess. Now go to the baby."

Annette started and her lips opened. With a little cry she ran to a cradle in the corner—a very poor and shabby cradle—and tenderly lifted a sleeping infant. "Poor little angel," she crooned. "Did you think your mother had forgotten you?"

Its mother?

"Whose child is that?" I asked the man, and he noted the threat and challenge in my voice.

"I don't know what right you have—"

"I have a right, and we will not discuss it," I peremptorily interrupted.

"— to come here an' raise this rumpus an' skeer a couple o' women, but if you'll be decent an' kind, like, about it, you kin ax my sister herself."

"Who is your sister?"

"Bess, there." He motioned toward Annette—Annette, gentle, dainty, refined, full of the softest graces—Annette the sister of this ruffian! "Come, Bess," said he, "brace up an' answer this man's questions. I won't let him hurt yer. You're jest as safe as you ever wuz in yer life. Tell him what he wants ter know, and tell it straight up 'n' down."

Thus encouraged—and, I could see, half commanded also—Annette (for I must call her that yet) turned and looked at me for the first time since I had entered the room. All hope that she might recognize me in the stronger light was dissipated instantly; she regarded me only with fear and uneasiness. I approached her closer.

"Annette," I said, removing my hat and looking down into her face as she sat holding the child——

"My name is not Annette," she hastily interjected.

"What is your name, then?"

"Elizabeth. My mother and my brother Joe call me Bess." This, looking up at me in the fullness of honesty, but perplexed and fearful.

"What is your other name?"

"Hartly. That is my husband's name."

I staggered under that blow, and the sharp eyes of the old woman and her son were fastened upon me with a steady gleam that burned.

"Whose child is that?" The words

came with effort from a great depth within me.

"It is mine. Her name is Pearl. I am her mother."

Thereupon I went all astray from myself, and looked around with helpless dismay. The four sharp eyes were consuming me. Annette—may I so call her yet?—gazed steadily up at me with all her old gentleness and sweetness, but still with fear and anxiety. Beyond the four burning eyes were the faces of men who stared in blank stupidity. I looked down at Annette, and there too I saw now, not clearly, if at all, something of the stamp of vacuity which was upon the faces of these ragged men grouped near the door. I was groping in a gloomy path beset with deep pits, and I breathed uncertain dangers. The four eyes burned me with a glowing heat. In a tangle of betrayed senses I essayed a persistence which I hoped would drag Annette forth from what I conceived to be some grim and overmastering constraint.

"Where is your husband?" I asked.

Annette was puzzled or cautious, for her glance flew for help to the man Joe.

"Where is your husband?" I pressed it upon her, feeling that I possibly had touched a spring. The man's sharp gaze was transferred from me to her.

"Answer him fair, Bess," he said, not unkindly; "give him the straight truth."

"He has gone to sea," answered Annette, looking up at me in a wondering and troubled manner.

"When did he go?"

She appeared to be thinking very hard and sounding her memory for an honest answer.

"It was while I was ill," she finally said with some suddenness, and with much pride in her victory of recollection.

"You have been very ill?"

"Oh, yes; very ill indeed."

"When was it?"

"It was when my baby was born." (Here she began to speak with a quick, nervous energy.) "I didn't know it until a long time afterward—I was so very ill—and my husband was not with me. When I recovered I had forgotten I was married. I was in a strange——"

"Stop there, Bess," fiercely cried the man. She obeyed instantly and trembled. "You've got one o' them spells o' your'n agin, an' yer tellin' what yer don't know, an' yer lett'n' yer tongue run away with yer senses. Forgot yer husband! Forgot yer was married! Maybe you've forgot I'm yer brother."

"No," faintly protested the girl, regarding him with wide eyes; "no, Joe; I haven't forgotten that, but I forget so many——"

"Who's this woman here?" demanded the man, indicating his mother.

"My mother. But, Joe——"

"Shut up! You've got one o' them crazy spells agin. Now, mister," added he, turning angrily upon me, "it's about time yer cleared out o' here, ain't it?" With increasing anger he continued: "You chased this here girl to her house, an' smashed in the door like a wild beast, and tore in here like as if you was goin' to murder the poor thing, an' now you've set her wits loose an' brung on another o' them wanderin' an' fergettin' spells. That's why I say you'd jist better clear out."

The man was in a rage; and, seeing that I did not move, he stepped to the chimney and took an axe-handle from the corner. At this juncture the old woman came out of her silence.

"No, Joe," she said with a strong, quiet firmness; "don't lose yer head, my son, for yer need a cool brain an' a stiddy nerve right here and right now. There's jist a misunderstandin' summers, an' it'll come out all right." Joe became quiet, and his mother turned to me and said: "You look lack a gentlemun, sir, an' no doubt you air; an' yer don't look lack you'd been a-drinkin'; but you'll allow you've acted very queer—I might say outrageous-like—an' my son ain't to be blamed fer gittin' mad at yer. Now, to save

my blessed life I don't know what yer drivin' at, but I b'lieve yer actin' on good principles and have mistook this girl fer summon else, 'cause you've been callin' her Xinette, or somethin'. You suspec' there's somethin' wrong, an' yer think yer know the girl, an' want ter get her out o' this scrape." And so the woman talked on, reviewing the whole situation with uncommon skill, reminding me that the girl did not know me, that in all her answers she had tried to tell the truth so far as a shattered mind would permit. The woman closed a long speech by going into a tedious history of the girl's life and assuring me that unrestricted opportunity would be given for an official investigation on the morrow. But the whole of this fine effort passed without effect upon me.

"No ! I exclaimed. "I will not trust her another night in your devilish hands. There is some crime here of so damnable a character that it overwhelms your lies. I will spare you the law on condition that you stand aside and let me take away this girl in peace."

Upon saying that I picked up Annette and her child and advanced toward the crowd that held the passage to the door, but the fury of the man Joe escaped restraint, and he sprang before me with his weapon aloft.

"No!" he cried with an oath; "not while I'm alive."

In an instant I had put Annette aside and sent a chair flying through the glass window. I leaped to the opening it made and cried out with all my strength. The call for help went bounding up and down the street from other throats, and swift feet were set in motion. I glanced back upon my enemies. The furious ruffian, taken unaware, had stood a moment in a stupor; but now, having roused himself, he came upon me with the one purpose of killing me. At that moment the shrill whistle of a policeman, always a thing which strikes upon one's sensibilities much as a physical blow, went at large upon the night and thrilled all the ruffian's nerves and drew the sap from his purpose; pallor swept over his face, his hand dropped.

"Joe," called his mother, in sharp anxiety, "git them fellers away quick an' come back here. *We'll see yit.*"

The man, quickened by a sense of danger, hustled away the dumb blank creatures and returned simultaneously with two officers, who headed a procession of frightened and curious people.

"Shut the door," I called out. The officers came within and the door was closed upon the crowd.

"Who was it called for help? What is the matter?" asked one of the officers.

"It was I who called," I answered.

"Oho, Simpson!" said the same officer, addressing Joe. "Trying to do this man, eh? You've been quiet so long that I thought you had given up that sort of thing and was sticking to the begging business. . . Well, what has he been trying on you, sir?" concluded the officer, addressing me.

"Nothing, I assure you," I replied, "but this girl, whom I have known from her infancy—I found her here and would have taken her away, but this man tried to kill me. I want you to help me rescue her from this fearful den."

"That girl with the child? Oh, she's one of Simpson's best beggars!"

Upon his requesting it, I gave a relation of all that had happened since I first saw Annette on the street. "She is one of his beggars, you say," I added; "there is yet a deeper and more damnable infamy. They say she is married. It is a lie; but see, she is a mother!"

"Ah!" exclaimed the officer, fixing a hard look upon Simpson, who, encaged within grave suspicions, appealed with his eyes to his mother. She thereupon said:

"I'd lack ter speak a word private to this gentlemun."

"I went with her into a corner of the room, and we whispered.

"What yer want ter do, sir?" she asked.

"I intend to take this girl to the police station."

"Ah, well! She's dementy, like; an', 'twixt you an' me, I ain't sorry ter git rid of her."

"You and your son also will go to the station, but as prisoners, to be tried and punished for your crimes."

This to her was not unexpected; but she fastened her gaze upon me with a penetrating, sinister, unwavering manner, and it hurt.

"I don't think you'd better do that," she said, not relaxing her gaze, and speaking very slowly. "Once there was a man what connivered in schemes fer to *remove* people what didn't have the sand fer to kill theirselves, an' when some folkses found it out they blowed on him, an' he spent the rest of his life in the state's prison. . . . Me 'n' my son don't want no trouble with *you*, an' you don't look lack a gentlemun what's got a wobbly tongue."

I left her and returned to the officers. Annette sat holding her child tenderly, but with a look so pathetic and helpless, so confused with fright and a shaken consciousness, that while I yearned to comfort her I could see that whatever little mind she had was drifting away. I said to the officers:

"I wish to take this girl and her child to Dr. Arnold's hospital. Will you kindly help me?"

"And Simpson goes to the station?" I heard the sharp clinking of handcuffs.

"No—not to-night; there is time for that. Help me in the present urgency."

Annette's resistance was slight, and there was no other. She sobbed all the way in the carriage, and talked incoherently to her fretting child. She was made comfortable at the hospital, but she sobbed continuously. "Her dementia," said Dr. Arnold, "is almost complete. The shock has been too great." I took him wholly into my confidence, omitting not even the Removal Company and Annette's experience there. He asked me many questions; his mind was quicker and deeper and shrewder than mine. "Without knowing it," he said, after a long silence spent in pacing the floor, "you have unearthed a singular and original form of crime. The Removal Company has never killed any one."

I looked at him amazed and incredulous.

"Not one," he continued. "The victims were simply treated with a drug which destroyed their minds partly and their memory wholly. Are you so confiding as to believe that Reiferth would have dared take any one's life? The risk was too great, and the plan lacked that merit of continued profit which distinguishes the one in actual operation."

I did not understand him.

"With wrecked minds the victims would make good beggars," explained the doctor. "The wretches are sent from San Francisco to Philadelphia, where the danger of recognition is small, and are kept as beggars under the reliable agency of Mr. Joe Simpson and his mother; and your Removal Company has a steady income through their zeal. The blank-faced men whom you saw at Simpson's, as well as this poor girl, have been subjected to the peculiar treatment of the Removal Company, and are employed as beggars."

I think I hardly understood all of this at the time, for I was weak from a great strain, and nervously awry from a certain strange, wild joy for having Annette alive and under my care once more.

"Can you restore her to her former condition of mind?" I asked.

Gravely and slowly he made answer: "There is a bare possibility. . . . The plan must be heroic and desperate. . . . If it fails—death or complete dementia."

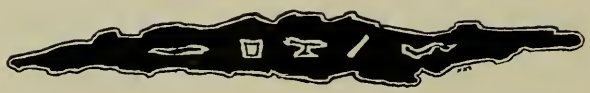
It came out afterward, in an investigation of Simpson's methods, that my poor Annette, whose innocence and sweetness must have been her guard against even the lowest brutality, had never been a mother; that was a deception practiced upon her to make her captivity surer.

"Ah," exclaimed Annette, upon emerging, after many days, from those

great depths, "I am still alive! Why did not Mr. Reiferth keep his promise? Have I been asleep long?"

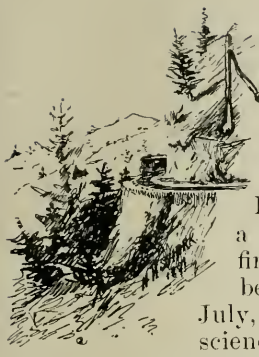
Ay, more than a year, Annette; but the hideous dreams of that black and terrible time have left no stamp upon your memory!

The sweet, cool western wind and the generous sunshine come to California, bringing their blessings to the rich and the poor, the prosperous and the unfortunate, the happy and the despairing; but I think that the gentle winds and the shining years bless with a special grace one happy home, which, born of suffering, of strange misunderstandings, of crime, of darkness, has issued forth into the broad yellow light that heaven sends, grateful, humble, inexpressibly content. That home is our's—Annette's and mine; for not alone have the church and the law made us man and wife.



THE MT. WILSON RAILROAD.

By Hon. B. S. Eaton.



MOUNTAIN railroads are one of the many notable achievements of the last quarter of a century, — the first one having been completed in July, 1869. Modern science does not presuppose any physical obstacle in engineering that skill and pluck cannot overcome. Streams so broad and deep that they seem insuperable barriers to land travel, are spanned by bridges, resting safely on a succession of massive piers of masonry; and river banks which have been so dissevered by physical forces as not to admit of this method of connection, are reunited by supporting ropes of steel, so that man may safely cross in the rushing car hundreds of feet above foaming torrent or fearful chasm. Mountains are pierced from side to side so that, through miles of solid rock, the stream of travel and trade may flow on as securely through the bowels of the earth as over the smoothest of its plains. But it has remained for the last quarter-century to devise methods by which the summits of high mountains may be reached with ease, speed and safety.

The first mountain railroad ever built was that by Sylvester Marsh on Mt. Washington, New Hampshire, which was begun in 1866 and completed in 1869, two months after the opening of the Union Pacific road. Until 1876 the little village of Marshfield, on the mountain side, less than three miles below the summit, remained its starting point. From this place upward the railway has an average grade of 1,300 feet to the mile, while the maximum grade is 1,980 feet or 13½ inches to the yard. As Marshfield lies at an elevation of 2,563 feet, while the mountain is 6,273 feet high, there is left 3,710 feet of altitude to be overcome in less than three miles! Yet, so far as we can learn, no serious accident has ever occurred on this railroad, although it is estimated that 30,000 persons are carried over it annually.

What Sylvester Marsh has done for the White Mountains, a public-spirited citizen and scientist of California proposes to accomplish for that State. Several years ago Professor T. S. C. Lowe, while traveling through Southern California became interested in the natural beauties of the section and decided to make it his permanent home. To his friends he said he was going to rest, but the innate energy of the man has made him one of the most active figures among the upbuilders of this portion of the State. He settled in Pasadena, building there a home which is one of the finest and largest private residences in the State, enriched with the accumulations of travel over the world. From the lofty tower of his house Professor Lowe has one of the finest views of the Sierra Madres in the San Gabriel Valley, and it was perhaps the contemplation of this that suggested the building of a mountain road that would take the tourist from the valley to the summit of Wilson's Peak in a short space of time, while affording an opportunity to enjoy the magnificent scenery. Professor Lowe has always been identified with some project of more than ordinary magnitude. He is the father of scientific aeronautics in this country, and originated the plan of using balloons in war. From early life he has been a close student, devoting his attention especially to chemistry and kindred pursuits; making a specialty of the experiments in which the various gases and their relations, one to the other, played a prominent part. In 1857 he noticed that

little attention had been given to the scientific study of aeronautics in this country, and with his accustomed energy he took it up and began an elaborate series of experiments. His first voyage celebrated the laying of the Atlantic cable, and was made from Ottawa, and in 1859 he constructed the largest aerostat ever built with a view of crossing the ocean, for the purposes of gaining knowledge of such meteorological phenomena as might not exist over the land. In 1860, at the invitation of the Franklin Institute of Philadelphia, he made a second attempt, which resulted in a memorial, signed by many distinguished citizens of Philadelphia, addressed to Professor Henry of the Smithsonian. A result of this was that Professor Lowe became the inventor of a meteorological system of which the present weather bureau is an outcome. He outlined a plan by which observations could be taken from high altitudes in various parts of the country and telegraphed to a bureau in Washington. His views were given freely to General Meyers, and as a result we have the present system. At the suggestion of Professor Henry, Professor Lowe made an experimental trip over the country before starting across the ocean. He left Cincinnati, Ohio, at 4 in the morning, April 20, 1861, and landed on the coast of South Carolina at 12 the same day, making the longest and quickest voyage on record. This was two weeks after the firing on Sumpter, and the scientist was arrested and thrown into prison by the Confederate authorities, but succeeded five days later in reaching Cincinnati again. The President, through Secretary Chase, then requested his presence at Washington, where he organized the war balloon observation corps, and for three years was chief aeronaut, rendering valuable service to the Government. During this time he made three thousand ascensions, and was the first to establish telegraphic communication from a balloon. His system and the many inventions connected with it attracted world-wide attention, and was adopted by the British, French and Brazilian armies, the Emperor of Brazil tendering him the rank of brigadier general, with large extra pay, if he would undertake the charge of the corps in the imperial army. Professor Lowe's contributions to science have been many and valuable. Among them may be mentioned the ice-making invention now in general use over the world, and the famous water-gas process for illuminating and heating, which is used in over five hundred cities in this country and Europe.

Professor T. S. C. Lowe.

His inventions have all been useful, and those intended for profit have in every instance proved financial successes.

Of his business experience and ability we have only to refer to some of the institutions of which he is the present head. He is President of the Citizens' Bank of Los Angeles, Cal.; the Los Angeles Safe Deposit and Trust Co.; the Pasadena Gas and Electric Co.; the Colorado Springs Gas and Elec-

Snow on the Summit of Mt. Wilson near the Upper Depot.

tric Co. He is Director, Consulting Engineer and a large owner in the Los Angeles Lighting Co.; Director in the Citizens Ice Co. of Los Angeles and in the Pasadena Fruit Packing Co. Professor Lowe is also owner of the Pasadena Grand Opera House Block, including the finest Opera House on the Pacific Coast; President of the Pacific-Lowe Gas and Electric Co.; owner of the New Lowe Gas and Electric system for the United States, Canadas and Mexico; and, lastly, President of the Pasadena and Mt. Wilson Railway Company.

Such is a brief glance of the man who has undertaken to build the finest mountain railroad in the world, and give to California an institution that will attract thousands to its shores. Professor Lowe's associates in this great work are all men of mark and notable business intuition. The vice president of the road is the Hon. P. M. Green, president of the First National Bank of Pasadena, who has been a prominent figure in the development of this section of Southern California. The treasurer is T. W. Brotherton, Vice-President of the Citizens' Bank of Los Angeles, while as an advisory board are the following well-known men, whose names are all associated with great successes in mercantile or commercial life. Gov. H. H. Markham, H. W. Magee, president of the San Gabriel Valley Bank; J. W. Hugus, president of the First National Bank of Rawlins, Wyoming; Dr. R. H. McDonald, president of the Pacific Bank of San Francisco; Andrew McNally, of Rand, McNally, the Chicago publishers; Hon. P. M. Green, president of the First National Bank of Pasadena; J. W. Scoville, president of the Prairie State National Bank of Chicago; Hon. T. P. Lukens, Pasadena National Bank, and A. C. Armstrong, of Pasadena.

Before glancing at the proposed work in the Southern Sierras it may be interesting to note some of the mountain railroads of the world that are already financial successes.

In the Alps we may mention the one that winds up to the top of Mt. Rigi, and another which accomplishes the still steeper ascent of Mt. Pilatus. Then there are two others near the Rhine, one climbing Mt. Drachenfals and the other the Neiderwald, while in Italy we are carried in a railway car to the crater of Mt. Vesuvius. Returning to our own country, in addition to the pioneer road up Mt. Washington, there have been built two among the Alleghanies, near Reading, Penn., one that scales Lookout Mountain, and, last and highest of all, the railway lately finished to the summit of Pike's Peak.

Mt. Wilson is one the prominent peaks of that section of the Coast range known as the Sierra Madre, and which forms the northern boundary of Los Angeles valley. Along this mountain chain there are several peaks as high as Mt. Wilson, and one or two that are higher, all connected by steep and narrow rocky ridges, most of which are very difficult to traverse. To the west stands Table Mountain, of equal height, and beside it "the Commodore," or San Gabriel, about six hundred feet higher, while farther on lies Mt. Disappointment, all plainly visible from the valley, but almost inaccessible on account of their ruggedness and entire lack of water. The special charm to the explorer of the wilds of Mt. Wilson is that near its summit there is plenty of the pure, cool liquid, while not for miles on either hand can any water be found on the higher portions of the range. Yet it is but recently that public attention has been specially directed to this wonderfully attractive locality. To learn how this grand recess of nature could so long remain hidden, we must refer briefly to some historical incidents connecting it with the recent incoming of American citizens to this part of the State.

About twenty-five years ago B. D. Wilson, a pioneer in Southern California, conceived the idea of procuring fence material from the mountain for use on his large estate. The scheme of a wagon road up its steep, rough sides was found to be futile, and even the opening of a trail that could be used

by the sure-footed little *burro*, when loaded, was no small undertaking. After a while Mr. Wilson found that the timber was not durable enough to pay the cost of getting it down, so the trail was abandoned. In the lapse of years it was washed out by rains, grew up to brush, and became almost obliterated. But the settlement of Los Angeles valley went on, the land along the base of the mountains was becoming peopled, and soon the daring hunter and eager sight-seer were inquiring for the "old Wilson trail." Gradually the thorny brush was cut away, and the damages wrought by winter rains repaired, so that men with their pack-burros could reach the heights, camp in the evergreens, catch the trout, and enjoy "high life" in a primitive manner. Still the journey thither was too toilsome for many to make, as bedding and provisions must be packed up the narrow path, while deep chasms yawned below, as if waiting for man or beast, that should slip or stumble. Hence, while those who did go said "it paid" to have been there once, once was voted enough.

A new and different kind of interest in Wilson Peak is now to be chronicled, and one that will prove—has already proved—the germ of an enterprise of world-wide fame. In the fall of 1888, Harvard University, having on the Pacific Coast a large photographing telescope — 14-inch glass—consented, on certain conditions, to place this instrument on Mt. Wilson for a period of four months, and thus determine what special advantages the location might have as a site for an observatory. This, should it be erected, would be furnished with the largest photographing telescope in the world—one with a 24-inch lens, now in process of manufacture. The results of the four months' sojourn of the astronomical outfit were so remarkable that the time was prolonged to a year, and so well satisfied were the Faculty of Harvard that right here was the gem of all known localities for this branch of their scientific investigations, that prompt action was begun with a view to acquiring a clear title to as much land on the summit as would subserve all their purposes. But the telescope that had, for a year, done so much for astronomy on Mt. Wilson, had had a "great time" in making the trip. It had literally gone *per aspera ad astra*. Its entire fixtures, with the packing cases, weighed no less than 3,800 pounds, so that much had to be done to the trail before the safe conveyance of the precious tube could be effected; but the doing of it, with its attendant difficulty and expense, roused the people of Pasadena as nothing else could have done to the imperative need of a good road up Mt. Wilson. With two still larger telescopes to go up there, with all that the erection of an observatory and related buildings may imply, and the wants of an ever-increasing flood of visitors to provide for—it is certain that *we must have a railroad*.

Of course, after enough had been done to the old trail to make the conveyance of the present telescope possible, it was passable for travelers on foot and on horseback, and soon the silent heights were invaded by thousands of people, and the long-neglected peak became famous. Though the trip still has much of toil and a spice of danger, hundreds take it, and camps and restaurants near the summit are hard pressed to find bed and board for the eager throng. What wonder then that the call for a railroad should echo from cliff to cliff of our mountain, and that the valley should murmur the refrain?

A preliminary movement has been made in this direction, and the result is a new and better trail for saddle animals, and one that is generally more safe. Following the spur which forms the eastern boundary wall of Eaton canyon, we find an almost continuous line of ascent from the base to the crest, and this was chosen for the new trail because, by its windings and doublings, it could reach the top without trestle work, and with only one bridge. It has an easy grade, plenty of dirt for the roadbed, and is free from special danger from storm-water in time of

rain. But not long will the people tolerate burro and mule riding and packing in an age like the present. The railway "with all the modern appliances" will soon carry us skyward, even from a bath in the ocean surf at ten o'clock to a seat on Mt. Wilson's crest ere the sun shall have made half his course from noon to the hour of setting. Can such a location longer fail of appreciation? No—the railroad is coming!

tion railway can easily be made to surmount the rest, while giving us by its curves a chance to view the whole of Pasadena in differing aspects. To the north the rugged mountain wall shuts off distant views, but is impressive in its rough grandeur. It is mostly covered by a thick growth of brush, which relieves its otherwise barren appearance. But look southward as we journey toward the base. Yonder lies the "city of homes," spread out in one

View of Ferns near Lower Depot, January First.

Let us anticipate the good time approaching by taking an imaginary trip on the rail. A half hour brings us from Los Angeles to the center of Pasadena, 843 feet above sea level, and only three miles on an air line from the initial point of the mountain road proper. But this three miles has an average slope of 230 feet to the mile. The Altadena road has already, in seven miles of detour, overcome over half of this ascent, and two-thirds of the direct distance. An ordinary trac-

broad panorama of beauty. There are its parks, and orchards; there its gardens and grounds displaying the fruits and flowers of every clime; there stand its mansions, with lawn and terrace adorned with walks and statuary, and all that wealth and taste can contribute. Another curve of the railway, and we see streets embowered with the pepper and the palm, and lined with cottages covered with climbing roses—a veritable fairy-land. As we recede from these we can still mark the loca-

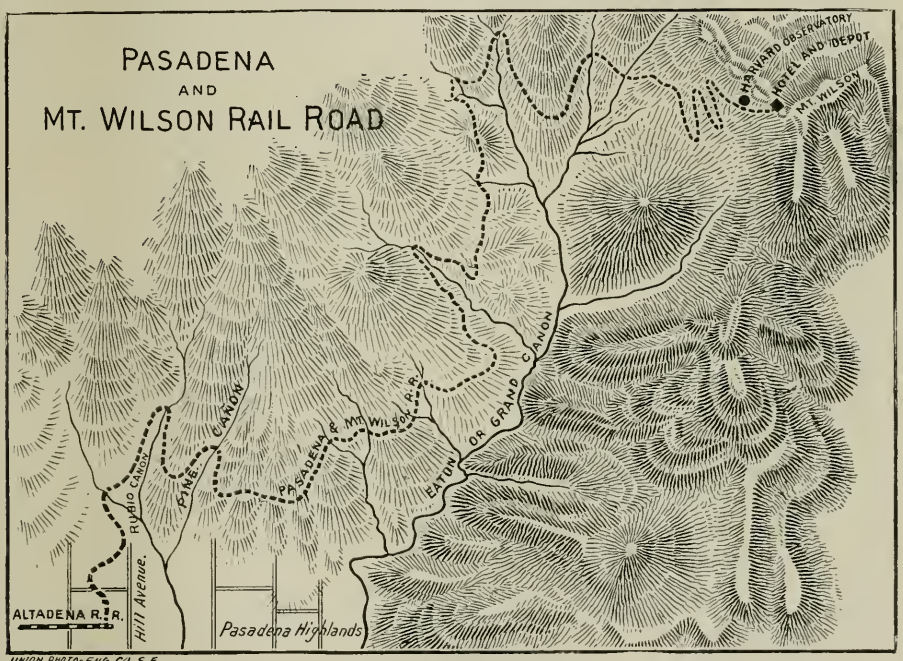
tion of the large school buildings, and count the spires of its many temples of worship. We begin the ascent, catching here and there a glimpse among the foothills of little canyons with spots of fertile soil watered by trickling brooks that have tempted hither the quiet settler. Here, away from the noise of town, many a picturesque home has been made, supplied with fruit trees and adorned with flowers, where the owner may rest content, enjoying much of pleasure that is unshared by denizens of thickly settled communities. But sweep on and up, further into the rocky solitude, and the view below is shut out, while new and varying objects engross the attention. We are threading our way along the western bank of Eaton canyon. Adown the rocky bed, far below us, in winter there dashes a raging torrent of water which dwindles in summer to a small, silver brook. So steep is the bed of this canyon that while we enter it several hundred feet above its bed, we find that long ere we reach its summit we shall be gliding on our upward way along its rocky bottom. In whatever direction we gaze it is now mountains, all mountains—wild, irregular, indescribable. In one place a mural precipice rises from the canyon bed 500 to 600 feet perpendicular, then slopes gradually back an indefinite distance. This and other like cliffs could not be ascended from the base, and the slopes above are covered with a thorny growth so dense that no one can penetrate it until a path has been chopped out foot by foot. Occasionally, as we wind around some projecting rock, we catch a glimpse of the temporary observatory 3000 feet above us. When we entered the canyon we were only three and a half miles—air line—from that point, and yet, after passing over nearly twice that number of miles of track, we are only half way up. Such is the clearness of the atmosphere that it seems as if a bird could reach it by a mile of flight; yet there are cliffs so frightful and gorges so deep between us and our goal that even wild animals avoid them, as if in fear of being entrapped therein. But, thanks to engineering skill, we wind safely in and out among their recesses, and soon reach the point where the narrow and crooked chasm broadens, and we find ourselves on the "pine level." Instead of a walled-in and narrow valley, we are in a broad basin that appears entirely surrounded by mountains. Countless smaller canyons branch off in every direction, as if seeking a place of exit. Dark fir trees, with lofty pines and cedars, adorn their sides and hide in their recesses, beckoning us to explore their cool depths, where, perchance, over some cliff there tumbles a crystal cascade, the water below rippling and rollicking on until it falls into a mirror-like pool, the home of the mountain trout.

Another one thousand feet up and we are still in the pines; in fact the forest region reaches to the mountain top. We are now as high as the city of Denver, and as the Lick Observatory on Mt. Hamilton. Now we encounter a chaos of enormous granite boulders—the original field whence came the hard, heavy spheres that abound in the beds of all our mountain streams, miles away from any formation that could have produced them. Up here these granite rocks are as irregular and angular as if thrown out by a blast, or reft from their original stratum by some convulsion of nature, while down below in the torrent beds, their features are rounded, their angles worn away by attrition and the action of water, till often their surfaces are fairly polished. A little further on, and for the first time since leaving the valley, we emerge in full view of Mt. Kinneyloa. This is a spur from the main ridge, running out in a southern direction at nearly right angles, and has the general contour of a lofty headland or promontory jutting out into the plain. Viewed from below, Mt. Kinneyloa appears like an immense number and endless variety of rocks *piled up* in the most promiscuous manner. To the observer in the valley it seems higher than the main ridge, and is sometimes mistaken for Mt. Wilson itself, though

The Wilson Trail, Showing the Trees.

it is really three hundred feet lower. This is a spot much frequented of late, because it affords a fine point of observation, having a large scope of horizon on account of its singular position. Its highest point is distant about one mile from Wilson Peak, and is reached by a footpath branching off from the "old trail." This curious mountain spur forms the divide between the Eaton and the Santa Anita canyons, and is so precipitous along portions of its sharp backbone, that rocks thrown down on either side, will not stop until

workmen, though it required the labor of two men half a day to clear off and level ground enough for a couple of tents. After the workmen left, a Pasadena caterer conceived the idea of establishing a permanent camp for the entertainment of visitors. And he made a success of it, notwithstanding it was near 5,000 feet above his base of supplies, which must all be conveyed thither on the backs of animals. Yet his guests were treated to all the market affords—fresh meats, fruits and vegetables, which the fierce appe-



Map of the Mt. Wilson Road.

they reach the bed of the mountain creeks, perhaps 1,000 or 2,000 feet below. Such a favorite pastime has this been with visitors that hardly a rock of moveable size, that is big enough to make a racket in falling, can be found in these sections of the ridge pathway. About half way between this peak and Mt. Wilson a saddle or depression in the connecting ridge marks the head of the west fork of the Santa Anita canyon. When the Harvard telescope was taken up a camp was established here for the accommodation of the

tites of mountain climbers could not fail to appreciate. This mountain restaurant business grew apace; more ground was cleared and more tents erected, until now the "camp" has the appearance of a miniature village. And, though the place has changed hands, it still continues to enlarge its borders, compelled thereto by the ever-increasing throng of sight-seers. This station or camp is a half mile below the summit, as the old trail goes, but it has a fine outlook to the south and west, and a few minutes' walk will

take you to the points of rare interest. But the train moves, and winding gracefully round the head of Eaton canyon, gradually gains in its northwestward sweep a low point of the main ridge, where the track passing over, doubles back upon the northern slope. But before making the last principal curve let us take a comprehensive view of the great amphitheater, along the upper edge of which we have been skirting to reach the crossing point. Before gaining the little village of tents we had been going to the southeastward, but since passing that location we been retraversing the same slope, only at a higher level, from which the view baffles description. You pass in review almost the entire route over which you have come, and wonder how, almost unconsciously, you have been conveyed to such an altitude. Directly below you lies the great basin into which the canyon we ascended has conducted us. Glancing back at its tortuous and oft-hidden course, we can see how spurs from the mountains on either side continually project themselves into its bed, as if enviously trying to prevent the formation of a highway by which the waters of this broad depression might have egress to the thirsty plains below. Scattered through the basin are baby mountains of cone-like form, clothed, like their more pretentious neighbors, with forests of pine and fir. Countless ravines seam the rim of this great upper valley, which all pay their winter tribute of water to the main stream that forces its way down the great canyon, while here and there we see the beetling precipice, on whose side no foothold could be found, yet the top is crowned with lofty trees. This description of scenery would be incomplete did we not pause to review the flora of the region through which our railway has passed. For miles before we reach the base of the mountains, there are, in springtime, great fields covered for weeks with the brilliant California poppy, so bright with color as almost to dazzle the eye and to be visible many miles away. As the mountains are entered we find a variety of wild flowers that grow nowhere else, and exhibit tints and fragrance not met with in garden or conservatory. They do not bloom early, but many may be found during the entire season.

We are at the crossing-over point of the mountain ridge, and must course along its northern slope, losing sight for a few minutes of the enchanting vision over which we have been lingering. The outlook now is all to the northward, and a wild wilderness of mountain peaks and ranges meets the eye. Soon the final station is reached, and we leave the car, while the mind, already weary with the contemplation of preliminary wonders, briefly folds its wings and permits the bodily frame to partake of the good cheer appropriate to the place and occasion.

Standing upon the crest of Mt. Wilson, and looking directly west, you find the view intercepted by "The Commodore," 600 feet higher than your present position. North of this peak, and across the valley of the Arroyo Seco, are two cone-like peaks—the Big and Little Strawberry mountains, the former standing 7000 feet above sea level, the peculiar shape of their summits suggesting the nomenclature. Turning half round your attention is attracted by a mountain that differs in appearance from all the others. It is known as Barley Flats, because, being covered with a variety of wild rye, or cheat wheat, its general appearance resembles that of a barley field. The surface is free from rocks and underbrush, and, though rolling, has no precipitous slopes, while the umbrageous pines scattered over it make it look not unlike an immense park. Its distance is five miles away, but you are separated from it by the valley of the north fork of the San Gabriel River, and the adventurer who thinks to walk over some pleasant morning before breakfast, will find that he has to descend a steep mountain side of about 2000 feet — vertical distance — and scramble up an equally rough path to the same altitude on the other side.

It is a good day's journey to go over to Barley Flats. This north fork furnishes fine fishing, as it abounds in mountain trout. A half mile east of the observatory stands Echo Rock, and from this point can be obtained one of the grandest views the world affords. Stretching away easterly for eighty miles lies a vast sea of mountains, distinct in their outlines, and covered generally with vast primeval forests that have yet to hear the echo of the woodman's ax. The first prominent peak to attract your attention is Mt. San Antonio, or "Old Baldy," 10,000 feet high, and then comes the Cucamonga Peaks, of nearly equal altitude, while in the distance lies San Bernardino—the base line peak—"Old Grayback," 12,000 feet high, and Mt. San Jacinto, of a height somewhat less. These last two stand on opposite sides of San Gorgonio Pass like grim, hoary sentinels at the gateway into the paradise of the coast. But these great peaks are so distant that Mt. Wilson loses nothing of its height by comparison with them. Now we return to the contemplation of what the south and southwest can reveal—the scenes last and brightest of all in the round of the horizon. At our feet lies Pasadena, already passed in review. Beyond its confines the eye falls upon the great Raymond Hotel, where hundreds of tourists find one of the best of winter homes, and to whose hospitable halls many of them return year after year, so potent are its attractions. South Pasadena and Alhambra lie just beyond; Duarte, Glendora and Whittier can be seen; while Azusa, Covina, and, last and most ambitious in her outreach for distinction, the city of Ramona, are all within the scope of vision. Other young towns might be named, but Los Angeles, the queen of them all, appears in the southwest, while the seaside resorts are discernible beyond.

What is this glory of celestial blue that lies gleaming on the horizon? The ocean on which Balboa first looked from the Isthmian mountains, and which Magellan first traversed 370 years ago—it is the Pacific that rolls before us, and only about thirty miles distant on a straight line. Out in the blue deep, some twenty-six miles, can be seen the island of Santa Catalina. Its general appearance, as outlined against the sky, is that of a continuous low mountain, with a depression near the center, which almost severs it in twain. But, under atmospheric conditions favorable to *mirage*, it will assume many grotesque forms. I have seen the eastern end, which is really a gradual slope, apparently rise in the air like a perpendicular cliff 1000 feet high, and at times even to overhang the sea. Occasionally a portion of the ridge will assume the shape of a high table of land, upon which appear forms resembling castles and towns, with pillared colonnades, or rows of immense columns standing roofless, reminding one of pictures of the ruined temples of old, or of the unearthed remains of Pompeian splendor. San Clemente is another island made interesting by the archæological treasures found there. Farther north lies the island of Santa Barbara, opposite the city of the same name. The surf on some portions of the shore-line is plainly visible when the light is favorable, as also the shipping, sometimes as far as the harbor of Avalon, in Catalina. Let us round out our day of high enjoyment by watching a sunset on the Pacific. Word-painting of the scene is all too weak—let imagination wrestle with it alone. Now the landscape darkens and the shadow creeps ever higher up the mountain side, while below, from the cities of Los Angeles and Pasadena, the electric lights flash out until at last, down in the broad valley, there seems a constellation that endeavors to outrival that in the heavens above.

Again, we wake from a most refreshing sleep to witness a sunrise from the summit. We stand on what seems a celestial vantage ground; but how changed the scene from yesterday! A snow-white sea of fog covers the broad valley, leaving only a few hilltops, like islands, above the gently shifting un-

Car Going up Eaton Canyon.

dulations—while above, the sun pours his full radiance on the wonderful *fleeciness* of its dazzling surface. Imagine the effect—it cannot be told. When the eyes become weary from its contemplation, let us rest them by examining the ground about our feet. Its most striking characteristic is a remarkable unevenness. There is no *level* plateau up here, and scarcely a spot can be found large enough to spread a blanket without finding too much slope to allow one to rest comfortably upon it. Still it is not desert-like, for everywhere there is vegetation, varying from the lowly flower to the lofty forest tree. But the fog is scattering, and we can see its remnants floating as bright clouds far below.

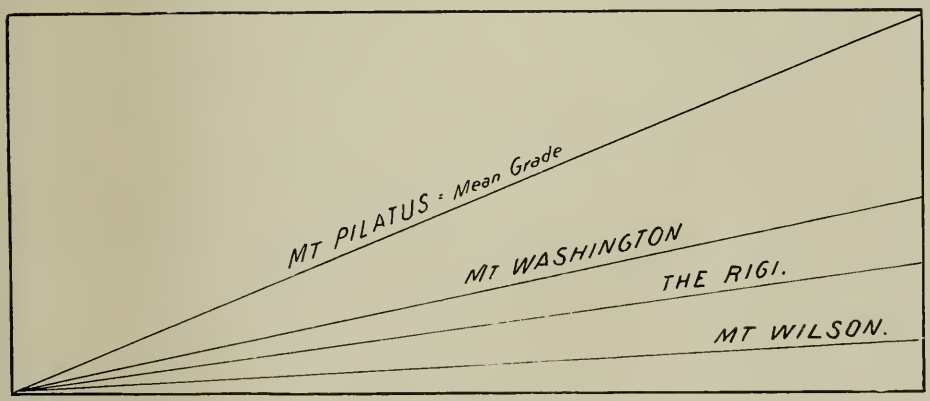


Diagram of Grades.

The beauty and grandeur of the scene are enhanced by the revelations of our second day on the summit, and one feels the inspiration that naturally possesses those who find themselves elevated above all their near surroundings.

To visit the Pacific Coast and fail to ascend Mt. Wilson will, in the future, seem as absurd as to go to Egypt and not look at the pyramids, or journey to Rome and neglect to examine the Coliseum or view the Vatican and St. Peter's. Mt. Wilson is destined to become the Mecca of tourists in Southern California; it will be sought for summer residence by many who prefer the highland air to that of the sea shore, as soon as the railway shall make it entirely accessible. Nor will it be a favorite resort in summer only. When the eastern tourist becomes tired of our midwinter surroundings of dark-green orange groves, spangled o'er with golden globes—when he wearies of the springtime verdure of barley fields and alfalfa plot, he can, in two hours' time, betake himself to the cold region he longs for—he can find a mantle of snow covering the rocks of some of the remoter slopes, and gathering heavy on the cedar branches in some dark ravine, and enjoy snowballs, and, perhaps, a toboggan slide, or skim on the flying skates over the frozen surface of the artificial basin already planned for the delight of such as he. There is room for hotel and summer cottage; there will soon be extra buildings for scientific purposes, with numerous other attractions. And when one wearies of the wind and cold of the summit, he has but to step on the car and glide down to sup and sleep among the roses and orange groves of Pasadena.

The Mt. Wilson road possesses advantages that others do not. Most of the mountain railroads already built are in latitudes that render them unavailable except in the summer. That on Mt. Washington has a "season" averaging less than three months, while the road up Mt. Wilson will be serviceable the entire year. The local population around Mt. Washington is small, so that most of its patronage must come from distant cities, while

within one hundred miles of Mt. Wilson live almost half as many people as appear in the census of the whole State of New Hampshire. The Mt. Washington road needs endless repairing on account of the extensive use of timber supports in its construction, while on the California road nearly the entire structure will rest on a foundation of solid rock. More people already visit Mt. Wilson annually, with only foot and saddle for conveyance, than are accustomed to ascend Mt. Washington, although a good carriage road exists to above the timber-line. Owing to our southerly position Mt. Wilson is clothed with forests to the summit, while for quite a distance below the crest of Mt. Washington bare and barren rocks alone greet the eye. During the brief summer season frequent clouds and rains often disappoint the tourist in the outlook he desires, while on Mt. Wilson, taking the whole year, rainy season included, probably not more than one day in fifteen would prevent "full, unclouded vision."

The nearness of the ocean, with its attractive beaches and hotels, gives an advantage to Mt. Wilson, with which the inland situation of Mt. Washington cannot successfully compare; while the great observatory will add a unique attraction to persons of scientific tastes who wish to take their vacations on this coast.

A comparison of the real usefulness of the roads already built with the proposed one is fraught with interest. It can readily be seen that the easier the grade on a mountain road, the more it can do in the way of transporting supplies of all kinds, especially of building materials. The railway on Mt. Washington has to overcome an altitude of about 3,700 feet in three and a half miles—average grade, one foot in about five. That on Mt. Rigi reaches an elevation of 4,368 feet above its starting point in five and one-fourth miles of track, being a grade of about one foot in seven. On Mt. Pilatus an altitude of 5,344 feet is reached with somewhat less than three miles of track, necessitating the almost unparalleled steepness of grade of one foot in a little less than two and a half. The road up Mt. Wilson will "take it leisurely," using over twelve miles of track in making the vertical ascent of about 4,700 feet, rendering this railway capable of doing a fair transportation business in all lines necessary, the grade averaging only one foot in over fourteen. Hence, a higher speed can be maintained with an equal amount of motive power. The accompanying diagram will show the relative gradient lines of these four mountain railroads.

It is interesting to know that each and every one of the roads has yielded a large per cent on its cost, in short, has been a paying investment. It is believed that Mt. Wilson will pay better than any of the roads mentioned, besides exerting a far-reaching influence on the immigration to Southern California, and on the character of that immigration. We are told that fares will be lower on the Mt. Wilson road than on the others, on account of its greater patronage in the fourfold length of season. The motive power used will probably be electricity, since engines of less weight in proportion to their tractive force can be employed. The road is to be built and equipped in the most substantial manner, and furnished with every known appliance for safety and comfort. And when citizens of Lower California conclude to make summer homes among the wholesome pines of the upper heights, they can be carried to and fro on commutation tickets as readily as between Pasadena and Los Angeles; while the longer time it requires will be more than made good by the enjoyable nature of the trip. The rate of speed, though not expected to equal that on ordinary railways, can easily be made to double or triple that of the steeper mountain roads.

THE NEW PARTY: WILL IT SUCCEED?

By Ex-Governor Lionel A. Sheldon.

BUT one third party has ever been formed in this country, which gained control of the government and maintained it for any considerable period. Others have arisen upon local or temporary issues, and have disappeared without achieving more than local or temporary success. That such should be the result is philosophical, for it is only under extraordinary conditions that more than two parties are necessary. When particular issues are disposed of parties need not disband, for new issues appear with a continuity that characterizes the waves of the sea. On new questions individuals change from one party to another as their convictions dictate. In this way, and through changes of views, transformation of parties often takes place. When there are several issues before the country it is not infrequent that individuals differ with their party upon one or more of them, and in such case the proper course is to strike a balance and vote as in their opinion will best promote the general welfare. Party allegiance is not regarded by intelligent and independent men as a perpetual obligation. Hence, as a rule, evils are remedied and reforms are accomplished without the interposition of a third party, and through changes from one to another. Ours is a government founded upon and controlled by popular opinion, a fact which political leaders fully understand, and every party, for the sake of success, if from no higher motive, will yield to popular demand. It has never been difficult to press one of the parties into the support of meritorious measures, and it has been found to be more practicable to promote the success of a cause inside than outside of the party. These recognized truths constitute serious obstacles to the success of the new party movement.

Another difficulty is encountered at the outset. Every man who has a new idea that he wishes to propagate or a scheme to promote will apply to the new party for an indorsement. Those of extreme views are the first to be attracted to it, and if recognized in the platform they repel the large class who are disposed to proceed through evolutionary processes, and to "make haste slowly." If the extremists are not recognized to their satisfaction they become a refractory and disturbing element. Americans are generally conservative and are not disposed to attempt to reach results at a bound. To succeed it is necessary for the new party to combine several elements whose interests are in substantial harmony, and it must avoid disregarding the legitimate rights and interests of any class. And further, it will be necessary to convince the majority of the people that the removal of existing evils cannot reasonably be expected through the action of an existing party. At the present time complaints are against the money power and of the laws which it is alleged sustain and give it special advantages. Numerous remedies are proposed, which will pass through the ordeal of discussion until February 22, 1892, when the convention of the new party will assemble and promulgate its platform. It is impracticable to discuss them in detail in this article. In considering the principal ones the inquiry will be as to their merits and whether it is probable that neither of the old parties will deal with them in a reasonably satisfactory manner, and also whether the interests of the several elements sought to be combined are not so conflicting as to prevent harmonious action.

The activity and energy displayed by the advocates of a new party tend to impress the public mind with the idea that it will achieve success without serious resistance. It will be un-

safe to assume that the old party leaders will be idle. Neither party will retire from the field without contesting the ground inch by inch, and both will put themselves in the best possible position to command popular support. A session of Congress will commence on the first Monday of December. Each party has a majority in one of the branches, and will maneuver not only to outgeneral its old-time antagonist, but to satisfy the elements which the new party promoters are endeavoring to combine. It is true that the Democratic and the Whig parties were so environed as national organizations when the Republican party was formed that it was impossible to commit either to the cause of freedom. It may be that the Democratic and the Republican parties at the present time are so allied to the money power that they cannot be released from its clutches, but it is more probable that one or the other of them will be forced by popular sentiment to favor measures that will afford partial if not complete relief from present evils. It will be nine or ten months before Presidential candidates will be nominated and national platforms promulgated. It is more than probable that some of the measures proposed by the new party will be approved by one or both of the old parties.

Complaints of trusts and combinations formed by capitalists have already been heeded. The last Congress passed an anti-trust law, and probably went to the verge of constitutional authority. Some of the States have enacted similar laws, and the courts, whether there exists special anti-trust legislation or not, have uniformly declared trusts to be contrary to public policy and unlawful. Both of the old parties appear to be ready to pronounce in favor of the absolute suppression of trusts of every name and nature. Neither has failed to recognize the existence of abuses in railroad transportation, nor to take steps toward their mitigation. Congress enacted the interstate commerce law, which prohibits unjust discrimination and enforces good service. All the States have laws of a similar character, and which are more or less effective. In many of them maximum rates are prescribed, and in some, commissions are empowered to fix them upon local or State traffic. Outside of interested parties, none deny the power of Congress to regulate charges in interstate, or of the States to do likewise, as to local transportation. It is an old and just principle of the common law that the carrier is entitled to receive a reasonable compensation for his services, and it is well settled that the national and State Governments, within their respective jurisdictions, may provide the mode for determining what is a reasonable compensation. It will require but little pressure to induce either party to go to the length of protecting the people against exorbitant charges. If there is sufficient strength to assure the success of the new party, it ought to be an easy matter to control the action of one, at least, of the old parties, in regard to railroad transportation. The proposition that the Government shall own and operate the railroads will generally be regarded as extreme. The country is not ready for it, though such a policy has been successful in other nations, and the practicability of placing all the roads under one management has been well nigh demonstrated by the systemization that has already taken place. A deep-seated feeling has always existed against enlarging the powers of the Government, and opposition to the increase of patronage which such a policy would involve, has become generally prevalent. These elements would be joined by bond and stockholders, and all others interested in railroads, in combating the measure with all their powers. If the new party platform goes to this extent it would be ill-timed and fatal to its success. Making the telegraph a part of the postal system is not a new idea. In 1884 the Senate Committee on Postoffices and Postroads reported in favor of it, and in its support Senator Hill, of Colorado, its Chairman, made an unanswerable speech. The pres-

ent Postmaster-General urged the matter upon the last Congress. For many years a considerable number of members of Congress have favored the measure, and it does not seem that it would be difficult to secure its passage without the creation of a new party.

The graduated income tax is evidently growing in favor, for the Ohio State Democratic Convention lately declared for it, and there seems to have been no opposition in that body. As a check upon the further accumulation of wealth by the few it has merit, but the best feature is that it recognizes the benevolent principle that the burdens of government should be borne by those most able. It is a usual tax in other countries, and an income tax was imposed in this during the war, and was continued for several years thereafter. The objection that it is inquisitorial lies to all tax laws, and if for that reason it should not be imposed, then all taxes should be abolished. To favor it would add strength to any party. There are many evidences that it will be adopted, sooner or later, by one of the old parties, under the pressure of popular demand.

On the money question the new party will be most strongly resisted, and in regard to that it is in some danger of overstepping itself. That increase of the volume of money should keep pace with the growth of population and production will hardly be gainsaid, and that there has been serious contraction when there should have been liberal expansion cannot, in truth, be disputed. Among all classes, except the money kings, there is demand for more money, provided it is good, but nobody wants any that is bad, and that is bad which is generally discredited. There can be no doubt that, as the world has been educated, money coined from the precious metals is regarded as the best, and few people, if any, are disposed to resort to any other, provided enough of that can be obtained, and all prefer paper money which is redeemable in coin. In order that there may be an enlargement of the circulating medium, free silver coinage is urged. It is not merely for the sake of enhancing the price of silver bullion, as some of the mono-metalists affect to believe. Silver is discredited for monetary uses simply because it is measured by gold, which has a prescribed and unchangeable value by law. Bi-metallists propose that the law shall regulate the value of silver the same as it does gold. Free silver coinage is desired, for the reason that it will increase the volume of good money. It is not a party question, for it has friends and opponents in both parties. The Senate, as now constituted, is committed to free coinage, and it is supposed that the House of Representatives will favor it by a large majority; and it may be confidently expected that within the next eight or ten months a free coinage bill will be presented to the President for his signature. If he signs it the question will be disposed of, but if he vetoes it, and it is not passed over his veto, it will be one of the most important issues of the Presidential campaign. The Eastern States are understood to be opposed to free coinage, and the States east of the Appalachian Mountains and north of the Potomac, may be able to dictate the platforms of both the old parties. In such case a new party, favoring free coinage, would have great strength in the South and West.

The annual silver production of the world is about $120,000,000, nearly one-half being in the United States. If the uses of silver were enlarged production no doubt would be materially increased, and free coinage in a little time would probably enhance our circulating medium $100,000,000 annually. Our annual gold production is about $33,000,000, but no more than $25,000,000 can be calculated upon for coinage. It is possible therefore that our coin money may be increased $125,000,000 each year. As that will not be sufficient for several years to come on account of the small volume of money we now possess, some way should be devised to secure a further expansion. It was supposed when the free national banking law was passed

that expansion would be ample to meet the wants of business through the voluntary action of the banks themselves, but they have demonstrated that they disregard the public interests altogether, as, seemingly by concert, they have produced contraction when it was most hurtful. The people have lost faith in them. The new party proposes, so far as indications go, up to the present time, to provide more money by the issue of treasury notes. It cannot be expected that either of the old parties will declare in favor of this proposition. It will be strenuously resisted by the money power, but it will have a strong support in the South and West, and it will not be wholly in disfavor in the East. If the new party confines its financial policy to free coinage of silver and the issue of treasury notes, it will have great strength in a large part of the nation. The proposition to loan money at 2 per cent. upon land mortgages and pawned imperishable agricultural products and to issue certificates thereon, which shall pass as money, is without precedent in this country and results, of similar schemes elsewhere have generally been disastrous. It will certainly encounter the energetic opposition of capitalists, will not be favored by manufacturers who are not accorded the same privilege as to their products, and the wage-workers and the non-borrowers will receive no direct benefit from the measure. It involves the creation of a vast and expensive machinery, and the utmost confusion and turmoil may be expected when the Government is compelled to resort to foreclosures and sales to collect its dues. It is necessary for governments to be as prompt to collect as to pay. It is presumable that every man who owns land and is in debt and is paying a higher rate of interest than 2 per cent. will borrow of the Government, and if what is alleged as to the aggregate of existing land mortgages is but half true, the volume of certificates that would be issued would create an inflation more hurtful than any stringency the country has ever experienced. When the quantity of certificates that would be issued upon cotton, wheat, corn and other products is contemplated one becomes bewildered. The measure has a single merit—that it would reduce interest rates, but if there is a sufficiency of money interest will be brought down through the law of supply and demand, and if this does not accomplish all that is desired the balance can be attained by the enactment and rigid enforcement of effective usury laws. Upon this question the Farmers' Alliance appears to be divided, and it is not probable that it will be indorsed in the new party platform, though the proposition is supported by men of ability and influence.

There are certain economic and commercial policies which have a direct and important bearing upon the money and labor questions, and upon which the new party cannot avoid expression. If we import less and export more the balances of trade in our favor will be enhanced, and so long as gold is recognized as the only medium of international exchange, they will be paid in that kind of money, which will materially add to our circulating medium that which all nations pronounce good. Our importations will be less if we manufacture more, and our exports will necessarily be increased if we possess ships with which to do our own transportation upon the high seas. English, German and French shipowners and captains are so many solicitors of trade, and through their efforts exportations from their respective countries are largely increased. We are nearly destitute of such agencies, because we possess but few ships engaged in foreign trade. It is estimated that we annually pay to foreigners $100,000,000 for carrying freight and passengers. This immense sum might be saved if we had a merchant marine sufficient to do our own work, and our people might earn something in transporting for others. We are the greatest producing-nation in the world, and it is highly important that we should have all the markets we can get, both at home and abroad. To enlarge and

diversify our manufacturing industries will not only tend to reduce importations, but will afford markets at home for raw materials and for all classes of food articles of domestic production. To foster and build up industries, and a merchant marine will greatly strengthen our money resources and afford wider fields for the employment of our rapidly increasing working population.

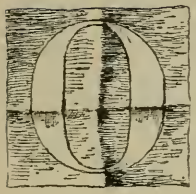
Upon these questions there may be irreconcilable differences among the elements sought to be brought into the new party. The effort is to combine Democrats and Republicans who heretofore have held antagonistic views; farmers of the North and South whose education and interests have been unlike. The people of the South have been schooled for half a century in the Calhoun economic theories and have never manifested a taste for maritime pursuits. The farmers of that section, as a whole, produce no surplus of food articles, and there has been no incentive to manufacture, that they may have more home people to supply with food. American cotton is so superior to any produced elsewhere that there has been little difficulty in finding a market for it, and the Southern people have not manifested by their works, except on a limited scale, that they realize the great benefit that would result to their section by exporting their cotton in the fabric rather than in the bale.

The Northern farmers have been taught a different theory, and they recognize the value of having domestic markets. It is not reasonable to suppose that the wage-workers will favor a policy that fails to give them protection against cheap foreign labor, and that cannot be done except through the recognition of the protective principle in tariff legislation. It is highly important that financial legislation should be more liberal; that abuses by trusts and in transportation should be removed; that communication through the telegraph should be cheapened, and that revenue laws should be so changed as to lighten the burdens of the toiler, but these are all overshadowed by the problem of giving employment to our laboring people in the future at adequate wages, and of surrounding them with elevating conditions. Agriculture is overdone, mining will not materially increase, and railroad construction will be less. Under present conditions we have a surplus of labor in the nation, and it is destined to be greater as population increases. The only means of affording appreciably larger opportunities for work are in manufacturing, and building ships and operating them in foreign commerce. On these questions the two old parties hold opposite views, and the new party cannot avoid taking one side or the other, for there seems to be no medium ground, and, so far as they are concerned, a new party does not seem necessary, for it will have no argument to make against one of the old parties. All parties, and the great mass of the people, are opposed to the importation of cheap labor. The laws discourage and restrict it in many ways, and they are being rigidly enforced. If further legislation appears necessary, there can be no doubt it will be enacted without opposition.

There is, undoubtedly, a great deal of dissatisfaction in the country, and such times are fruitful of suggestion and productive of unusual activity. The list of measures already proposed is very long, and all of them will be supported by earnest and persistent advocacy. In condensing and discarding, the convention, which will assemble in February next, will have a delicate work to perform. It may be restrained from going far enough, or it may be pushed to taking extreme positions. Danger lies on both sides. Its action will be taken in advance of that of the other parties, which will give them opportunity to concede all they think they should, and to take advantage of any mistakes that may be made.

SOME FOLK-SONGS OF THE SOUTH.

By David Starr Jordan.



ON the cliffs above Cedar Creek, a mile or two below the famous "Natural Bridge" in Virginia, is a beautifully situated but unpretending little hotel. Over its door is the modest sign, "Pine-Laden Inn for Collard."

This is the resort of the elite of the colored population of Virginia when they come to visit the grandest scenery in the Old Dominion. In this little inn are enacted, in a fashion, all the various scenes which take place in the more pretentious inn "for whites," above. The sentiments which move society in the lower hotel are little appreciated by their neighbors. The carefully attired waiter who serves in the white-man's hotel is very different from the black man who is free among his own race to seek his own pleasure.

The white man has not failed to interest himself in the negro, and our literature is rich in songs of negro life which the white man has written for him. Some of these are among the most charming or most touching of the minor poems in our literature.

They are not, however, the songs or poems in vogue at "The Pine-Laden Inn for Collard." The society which is gathered there has its own songs and its own poems. Of these poems, composed by the negroes themselves, for themselves, the genuine folk-songs of the black people, very few have ever come to the notice of the white people. These few are chiefly the religious songs which have become familiar to us through the pilgrimages of the Tennesseeans and other companies of "Jubilee singers."

In the present paper I wish simply to put on record a few fragments of genuine negro poems which I have gathered in different parts of the South. They have little merit or interest from any literary standpoint, but they are worth preserving because they were composed by the negro and for the negro. So far as I know none of them have been printed, and none of them have any "burnt cork" * adulteration. The negro minstrel, black or white, is an artificial product, and is native to no soil.

First of these is a fragment from Eastern Virginia, from one of those endless poems sung in the evening at the quarters, and to which many impromptu additions are made, as the song goes on. In verses of this kind usually a single person will sing the words of the theme, the others all joining in the chorus. This gives great scope for improvisation, and often the results of a happy thought will be approved by the others, and so form an accretion to the original song.

A worthless song which is thus frequently used to build upon, is this:

I went down to the river and I couldn't get across.
Chorus: Allelu-allay.

I paid three cents for an old black hoss.
Allelu-allay.
It was lame in one leg and couldn't walk on t'other.
Allelu-allay.

Blind in one eye and couldn't see out of t'other.
Allelu-allay.

MASSA'S PROMISE.

My old Massa promised me
That when he died he'd set me free,
But my old Massa dead and gone
And still old Sambo's hilling up the corn.

They took me down to the tater-hill
And made me dance agin my will,
They made me dance on sharp-toed stones
Till all the drivers left and gone.

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*Of "burnt cork" origin is probably the following, also obtained in the South:

What kind of shoes do the angels wear,
That they can climb up the golden stair,
And walk all around till they reach the very top,
Then shake down nickels in the missionary box?
Say, angel—meet me at the crossroad, meet me.
Angel, meet me at the crossroad, meet me;
Angel, meet me at the crossroad, meet me;
For I'se gwine to pay no toll.

Also from Eastern Virginia comes this striking account of

THE CREATION OF THE WORLD.

The world was made in six days
And finished on the seventh;
But according to the contract
It should' a' been on the 'leventh;
But the mason he got drunk,
And the carpenter couldn't work,
And the cheapest way to do it
Was to fill it up with dirt.

A touching fragment is this, obtained in Jefferson county, in East Tennessee:

I hear my children calling;
I see their warm tears falling,
And I must go.
For I was born in Georgia:
My children live in Georgia,
And I must go.

From the same locality comes the following striking picture of true love:

I said I'd built a cabin,
I asked her would she come?
And she flung her arms around me
Like a grapevine round a gum.
Chorus: Get along, Joe Clark, etc.

In Carteret county, in Eastern North Carolina, the following is sung in connection with the parlor games in the best society:

MISS JULIE.

O, round the ring, Miss Julie;
Round the ring, Miss Julie;
Round the ring, Miss Julie;
O, long summer's day.
The stars shine bright,
The moon looks light;
O, look away over yonder
And see some pretty little colored girl
And tell her how you love her.

In the same county of Carteret the boys sing and "pat" the quaint air of the

GEORGIA RABBIT.

Georgia Rabbit, whoa, whoa!
Georgia Rabbit, whoa!
Stole my lover, whoa! whoa!
Stole my lover, whoa!

Gwine to git nudder one, whoa, whoa!
Gwine to git nudder one, whoa!
Jes' like t'udder one, whoa, whoa!
Jes' like t'udder one, whoa!

Another song without end, having its origin at Beaufort, North Carolina, begins with the following verses:

When I was a little boy
I lived in Sugartown;
I climbed up in the sugar tree
And shook the sugar down.

Chorus: So get on the mountain train;
Get on the mountain train;
Get on the mountain train,
Until your ankles swell.

And Captain Alexander,
. . . . . *
He made me wear a ball and chain,
Until my ankles swell.
Chorus, etc.

I may close this series with a fragment current among the "poor whites" in Rabun county, Georgia, the work of a local poet of Rabun Gap:

THE GOOBER GRABBLER

A soldier sat by the road one day,
And he was looking very gay,
For on his back he'd a bag of meal
Which he had stolen from an old Tarheel.†

Chorus:
Bye and by, by and by,
Marry a girl with a bright blue eye.
Georgia girls there's none surpasses,
For they are fond of sorghum molasses.

He built him a fire to bake his bread,
And when he was done he gaily said:
"Nothing in this world surpasses
Good cornbread and sorghum molasses."
Chorus.

In Alabama they do eat peas;
In Tennessee just what they please;
In North Carolina tar and rosin,
But the Georgia girls eat goobers and sorghum.
Chorus.

As I was going through the Georgia towns,
The Georgia girls came snooping round.
Says they: "Young man, be you a traveler?"
"No, pretty miss; I'm a goober ‡ grabbler."

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* This line is better omitted.
† A native of the Tar State, or North Carolina.
‡ Goober, the peanut, commonly accepted as the emblem of Georgia.

PALO ALTO, CAL.

CALIFORNIA'S CLIMATE.

By Walter Lindley, M. D.

HE title of this paper is a misnomer. California has no one climate that she can distinctively call her own. The writer, in Auburn, Placer county, Redding, Shasta county, in the Strawberry Valley of the San Jacinto Mountains, or San Diego county, in telling of California's climate, will describe the rare atmosphere of from 5,000 to 10,000 feet above sea-level, redolent with the fragrance of pine forests, where the deer, the antelope, the bear and the California lion furnish entertainment for the sportsman; where beautiful mountain brooks, alive with trout, give the disciples of Izaak Walton rare opportunities, and where the majestic crags and chasms and the white-hooded peaks, surrounded by wonderful vistas of villages, cities, rivers and ocean, supply an irresistible inspiration for the artist and the poet.

Who will acknowledge, though, that the climate of these mountains, unsurpassed by that of the Swiss Alps, is California's climate?

An American of wealth is establishing a sanitarium in the valley of the river Jordan, near the Dead Sea. He ascertained that a bronchial affection was relieved where the barometric pressure was great, as it is in this valley of the Holy Land. This is the most marked depression on the face of the earth, being 1,200 feet below sea-level. This gentleman makes the reasonable assertion that where atmospheric pressure is greatest, as in the depressions, respiration is easiest.

In the eastern part of San Diego county, about one hundred miles from Los Angeles, is a depression traversed by the Southern Pacific Railroad, known to geographers as the San Felipe Sink, but commonly called—on account of the innumerable shells spread over its surface—the Conchilla Valley, and now of especial interest, because of the new lake forming from the overflow of the Colorado.

The unobserving transcontinental traveler over the Southern Pacific Railroad would travel the one hundred miles west of Yuma—on the Colorado river—without giving a glance out of the car window, as he would think he was on the Colorado Desert, and wish the train would go faster; yet this very spot is one of the most remarkable on the face of the globe.

Dr. J. P. Widney, of Los Angeles, while surgeon in the United States Army, crossed this region with troops twenty-one years ago. He then noticed surrounding this territory a well-defined line along the mountain sides, always at the same level. Above that line the rocks are sharp and jagged, showing that for ages the water had stood at that level. He says: "I found it to be the old beach of a sea." I find nothing else noted of this country until the surveying party of the Southern Pacific Railroad, in running the line from Los Angeles to Yuma, found that sea-level was at the point where Dr. Widney had noted the ancient beach. They then gradually descended to the south until they reached a depression of two hundred and sixty-eight feet below sea-level, at a point near Salton.

This basin is about one hundred and thirty miles in length by thirty miles in average width. The deepest point is about three hundred and sixty feet below sea-level. Along the northern margin of this basin, right up against the mountains, are great numbers of date palms. These tropical trees are indigenous to this valley, and many of them reach a height of eighty feet. When ripe, a single bunch of fruit weighs one hundred pounds. It has a

taste very similar to the date palm of commerce. The tree has large fan-leaves, and is the same as can be seen in almost every park and yard in the towns of Southern California. The passenger on the Southern Pacific Railroad, by glancing out of the north side of the car at Indio, can see these giant sentinels keeping silent vigil over the plains beneath them.

At Salton, on the Southern Pacific Railroad, the surface of the earth for nearly ten miles square is covered with a crust of salt from four inches to a foot thick. I stopped there in midsummer, before the waters had flowed in and formed the present lake, and went out on this great white field about noon. The mercury indicated 105° Fahrenheit in the house, but out in the sunshine, with the dazzling reflection from the glistening surface that extended for miles on each side, the temperature was probably 130° Fahrenheit. The workmen out in this peculiar harvest-field were as cheerful as any set of men I ever saw, and there was far less exhibition of suffering from heat than is to be seen, ordinarily, in July, in the wheat fields of the Mississippi Valley. The low relative humidity * explains the total absence of sunstroke here. The atmosphere in this region, adulterated by the chlorine gases emanating from the salt beds, must be nearly aseptic. There are extensive mills here for grinding the salt. It is not put through any system of purification, but, after grinding, proves to be excellent for table use. Several hundred tons are thus prepared every month and shipped away.

A few miles east of here are the famous mud volcanoes, which are equal in wonder to the geysers of this State. Owing to the treacherous character of the ground around them they have never been thoroughly examined. Professor Hanks, the State Mineralogist, undertook it, but breaking through the crust he was so severely burned that he was compelled to abandon his investigations. Here is an extensive, almost unexplored field for some adventurous scientist.

Indio is the place to stop and make headquarters for tours through this interesting country. It is the principal station in the valley, and near the northern rim of the basin, being only twenty feet below sea-level. The sandy plains around Indio were formerly considered a hopeless, barren waste, but the advent of the railroad has made great changes. Good water is supplied by surface wells; but in order to have water for irrigation, artesian wells have been bored. There is one two and three-fourths miles east of Indio that is now flowing one thousand gallons per hour. This flowing water was reached at a depth of only one hundred and fifteen feet, after boring through layers of sand, clay, sand, tough blue clay, clay, coarse gravel, clay and sand. Oranges and various other kinds of fruit are being grown here, and melons, tomatoes and berries ripen several weeks earlier than in Los Angeles and other places near the coast. There are in this vicinity about forty thousand acres of excellent land. The visitor here, on witnessing the water flowing from the artesian wells, the grass growing, the melons ripening, and the peach trees blooming, can fitly say with Isaiah: "The Lord shall comfort all the waste places. He will make the desert like the garden, and the desert shall rejoice, and bloom as the rose. For in the wilderness shall waters break out, and streams in the desert. And the parched ground shall become a pool, and the thirsty land springs of water."

In this valley live about four hundred of the Cohuilla Indians. This is an interesting tribe. Dr. Stephen Bowers, in a paper read before the Ventura County Society of Natural History, March 5, 1888, said that he believed them to be of Aztec origin. They are sun and fire worshippers and believe in the transmigration of souls, and that their departed friends sometimes enter into coyotes, and thus linger about their former habitation.

* If the lake is permanent, the conditions here will be materially changed.—EDITOR.

They practice cremation. Their principal article of food is the mesquit bean, which they triturate in mortars of wood or stone, after which the meal is sifted and the coarser portion is used as food for their horses and cattle, and the finer is made into cakes for family use.

The agave, or century plant, which is indigenous here, is also much used for food. The roots, roasted, taste like stewed turnips, while the stem, roasted, is said to taste like baked sweet potatoes. From this plant they also make the Mexican beverage, *pulque*, which has about the same alcoholic strength as beer. The ethnologist can, by gaining their confidence, get much interesting information from these very peaceable Indians.

I found at Salton and Indio, at this time, asthmatics, rheumatics and consumptives, all of whom reported wonderful recoveries. Some of these stories I accepted *cum grano salis*, which phrase is, by the way, especially applicable to the salt fields. These asthmatics and consumptives claim that the farther they get below sea-level, and the dryer the atmosphere, the easier they breathe. The rheumatics claim that the heat and dryness improves the circulation, and thus relieves them.

My stay was not long enough to make any trustworthy observations, but it occurred to me that, aside from dryness—mean annual relative humidity certainly not over twenty-five—and equability, there was considerable atmospheric pressure at a point three hundred and fifty feet below sea level, and that we had here moderately compressed air on a large scale. In a recent paper on the use of the pneumatic cabinet, the author, from many cases in practice, shows that compressed air relieves asthmatics and cases of phthisis. He says the compressed air will gradually force its way into every part of the lung, in order that the pressure may be the same on the inside as on the out. While the proportion of oxygen is of course not increased, yet there is an increased quantity in a given space, and we really have the oxygen treatment here on an extensive scale.

The physician may say that at from two hundred to three hundred and sixty feet below sea-level the pressure would not be as much as in the cabinet. That is true, but the patient goes into the cabinet for, say half an hour, three or four times a week, while if he is at a point like Salton he is breathing this moderately compressed air all the time, day and night. This is simply on the principle of the pneumatic chamber of Tabarie, the first one ever employed. This is the method recommended by Dr. A. H. Smith.* He refers to the therapeutic value of the increased amount of oxygen inhaled. He says compressed air is useful in catarrh of the mucous membrane, in acute and subacute inflammation of the respiratory mucous membrane, in restoring the permeability of air tubes occluded by exudation or otherwise, in asthma, in pulmonary hemorrhage, in pleuritic effusion, in simple anæmia, in inveterate cases of psoriasis and ichthyosis, and in the various forms and stages of phthisis. He does not recommend it in pulmonary emphysema. Dr. Smith says compressed air should be used promptly and perseveringly on the earliest recognizable signs of apical catarrh in those predisposed to chest disease. He also especially recommends it as an alterative.

Of course my deductions are all tentative, but I hope by calling attention to this unique region to gain the assistance of intelligent observers.

If a phthisical or asthmatic patient of considerable vigor intends coming to Southern California his physician might be justified (if the inflow from the Colorado does not materially effect the conditions as they were at my visit) in suggesting that—except during the summer months—he stop in Indio, and from there test the climate of this basin. If not suited or benefited, it is but two hours' ride by rail to Beaumont, a delightful resort, with excel-

*Smith, Andrew H.: The Physiological, Pathological and Therapeutic Effects of Compressed Air. Detroit: Geo. S. Davis, 1886.

lent accommodations, two thousand five hundred feet above sea-level; but two hours more to the pine forests in the San Jacinto mountains, from six thousand to ten thousand feet above sea-level, or to Riverside, Monrovia, Pasadena, Pomona or Whittier, all about one thousand feet above the sea; or to Los Angeles, three hundred and fifty feet above sea-level;* or—to Santa Monica, Long Beach, Santa Barbara, or San Diego, directly to the coast, and but nine hours' ride by rail and boat to Catalina Island, twenty-five miles out at sea, where a typical ocean atmosphere can be enjoyed. Thus an error in location can be quickly corrected.

To return to the term California climate: Here are innumerable friends writing from Monterey, Santa Barbara, Santa Monica, Long Beach and San Diego, all at sea-level, with an equable, humid atmosphere—delightful places to live forever. These writers think they really describe "California's climate." They talk of charming summers, spring-like winters, summer-like springs and June-like autumns; but San Francisco, Oakland, San Rafael, San Jose and Los Angeles will never consent that these places really have the "California climate." No; the writer from Los Angeles, three hundred feet above sea-level, Pasadena, Riverside and Nordhoff, all about one thousand feet above the sea, will describe what he believes to be the genuine California climate. He will tell about the ocean breezes being modified and mollified by their passage over the hills and orange groves; he will point out the advantages to the invalid of beautiful flower gardens, where the rose, the heliotrope and the fuchsia blossom out doors every day in the year. He will show the benign influence of thousands of acres of beautiful groves of orange, lemon, lime, fig, apricot, nectarine and pomegranate trees.

He will prove that half the robust-looking residents to be seen came to California with but one lung; but what right have these climate authorities to claim that they describe California's climate? Evidently, no right at all. San Francisco contains one-fourth of the population of California and has a climate peculiarly its own. A climate, in fact, that no other section has evinced any disposition to claim; even Oakland—just across the bay—very justly points to her freedom from raw breezes when compared with the Pacific Coast metropolis. Yet there is something decidedly invigorating in San Francisco's climate. It is a climate that grows on a person. Each trip the visitor makes leads him to like it better, but yet none of us will acknowledge that it is "California's climate." Not at all. Neither will we allow the marvelous climate of Lake Tahoe or the Yosemite to aggrandize that name.

Another climate that is being greatly lauded and much sought after is the insular climate. Catalina Island, twenty-five miles out at sea—forty miles from Los Angeles—has a climate that is the invalid's delight the year round. Here is an ocean climate without the discomforts of an ocean voyage. Here is an island many miles long, surrounded with remarkably transparent water, in the depths of which can be seen almost every inhabitant of the sea. On the shores of this island are innumerable droves of sea lions, while on the mountains that bisect the land the interpid hunter, rifle in hand, makes the wild goat bite the dust. The higher altitudes of California are but little known; yet here we find localities which compare in beauty and benefits to be gained to many of the famous European mountain resorts.

August 26, 1888, in company with a

* OTHER PLACES BELOW SEA-LEVEL.—Sink of the Amorgosa (Arroyo del Muerto), in Eastern California, two hundred and twenty-five feet below sea-level; the Caspian Sea, eighty-five feet below sea-level. Lake Assal, east of Abyssinia in the Afar country, eight miles long and four miles wide, is about seven hundred and sixty feet below sea-level. Its shores are covered with a crust of salt about a foot thick. This salt is a source of revenue to the Afars, as they carry it by caravans to Abyssina, where they find a ready market. There are several other depressions about six hundred feet below sea-level in this vicinity. The noted oasis, Siwah, in the Libian desert, three hundred miles west of Cairo, is one hundred and twenty feet below sea-level. Here are beautiful date-palm groves, and here also the apricot, the olive, the pomegranate and the vine are extensively cultivated. In this same desert is the oasis Araj, two hundred and sixty-six feet below sea-level. There are also numerous other depressions in the desert portion of Algeria and at various points on the Sahara desert.

friend, I left Los Angeles for the San Jacinto Mountains to see something of our higher altitudes. Four hours' ride by rail took us to the town of San Jacinto, where we were met by a patient of mine whom I had considered to be at death's door from phthisis. He remained quite close to the coast for a year, but lost ground, and suddenly determined to go to San Jacinto, where he "took up" a piece of government land. There was a steady improvement almost from the first. He has this season worked in the hayfield. While he is by no means a well man, yet the change for the better has been wonderful. San Jacinto has an altitude of about fourteen hundred feet. It is too warm for comfort in the summer, yet numerous consumptives claim they gain most during the hot season. Here we hired two horses and a buggy for $3.50 per day, and drove ten miles to the east, to what is called "the foot of the grade," where we stayed over night. The accommodations would have been fairly good but for the fact that the beds were all engaged. The consequence was, we had to sleep on a straw-pile in the barn, but the food was good, and, like the straw, was clean.

At 5 o'clock A. M. the next day we started up the grade. The rise is said to be about thirty-three feet in a hundred. A six-mule team has all it can do to haul eight hundred pounds up this steep road. The grade is two and a half miles long, and it usually takes at least three hours for a mule team to reach the top. It seemed to be the business of every person we met to try to frighten us, and we came near not attempting to drive up, but finally did try, and our little team pulled us up in just an hour. We gave them a rest about every twenty yards. Once in a while, when we dared to take our eyes from our horses, we would glance back at the magnificent landscape below us.

When we arrived at the top of the grade we found ourselves at an altitude of five thousand two hundred feet, and in the edge of a beautiful forest of towering pine and fir. For four and a half miles we drove over a charming road aligned by the refreshing green trees, enswarded by grasses, bushes, and many varieties of flowers—the rose and wild fuchsia predominating. Our horses slaked their parched throats and cooled their dry and heated feet in a musical mountain stream. The bluebird, the mockingbird and the quail were omnipresent, while the road-runner, with his long tail, marched along majestically before us, and the gray squirrel ran into his hole near the top of the tree. The sun rose as we drove, and we felt that we were indeed in the heights. The cool, invigorating atmosphere, brought to us through the pine boughs by a gentle breeze, fanned our foreheads and filled our lungs.

A few cabins picturesquely located indicated that our morning drive was ended. It was 7:30 o'clock when we sat down with excellent appetites to a rural breakfast of oatmeal mush, bread, milk, ham, butter and coffee, all of the best quality, in a primitive hotel.

Here we passed a delightful, dreamy day. The place is called Strawberry Valley. About two hundred persons were living here in tents and cabins, but they all leave by the middle of October. Then the snows begin. Consumptives and asthmatics are here in considerable numbers, and when the snows fall they hasten to the valley, three thousand five hundred feet lower. We made arrangements to go to the peak of Mt. San Jacinto, eleven thousand one hundred feet high, accompanied by Warner, the guide. Bright and early we were up the following morning, and soon had our horses packed for going up the trail, but alas for the propositions of man! Our horses began to buck and run around in a circle, and soon our well arranged packs were flying in all directions. Strange to say, this discouraging episode evoked expressions of unbounded mirth from all of the campers, who had gathered to see our brilliant cavalcade depart on its adventurous mission. I very much feared that such convulsive laughter would cause a hemorrhage

from the lungs of some of the valetudinarians who stood gaping on. How sad that would have been! We saw that our mistake was in not asking to have saddle-horses hitched to the buggy at San Jacinto. I would advise persons making this trip to insist on having saddle-horses, and have saddles in the buggy to use when Strawberry Valley is reached.

We soon secured another horse and a burro, and were fairly started by 8 o'clock. It is fifteen miles from Strawberry Valley to the peak. The first three miles is through rolling pine forests by a mountain stream. Then we began to climb, and for an hour we were going upward until we reached the Tauqwitz Valley, seven thousand five hundred feet high. Here again were thousands and thousands of acres of pine forests, and rich land well watered by never-failing mountain springs. In the center of this valley there is a peat bog. The horses passed readily through it, but the burro on which, to my regret, I was mounted, absolutely refused to take a step in the yielding, marshy, grass-covered bog. As I sat there whipping, coaxing and hallooing all to no purpose, I might well have been dubbed, like Don Quixote de la Mancha, the Knight of the Sorrowful Figure. By going a circuitous route I avoided the swamp, and we were soon climbing higher and higher. We went until we passed over a ridge and into another magnificent combination of forest and grassy plain called Tamarack Valley. Here we were nine thousand feet above the level of the sea. As we passed through a beautiful meadow where the foot of man had rarely trod, a deer ran before us and was soon hidden in the timber. Again, after about four miles ride, we began to climb. As we crossed the last mountain stream at about 5 P. M. we filled our canteens and watered our horses. At 6 P. M. we reached a level plateau ten thousand three hundred feet above the level of the sea, and only eight hundred feet below the peak. Here we were to spend the night. Soon we noticed the effect of the rarefied air. As I assisted in getting logs together for a fire, I found that walking ten yards exhausted me, and gave me the sensation of having climbed rapidly two or three flights of stairs. My heart beat at the rate of one hundred and eight per minute. Our guide was an intelligent young law student from Frankfort, Indiana. Over two years ago he began having hemorrhages of the lungs, and a year ago last April, while unable to sit up, was brought by a brave sister to Southern California. Tenderly and anxiously she cared for him in that long and tedious journey toward a forlorn hope. He improved from the time they reached California, and they soon came camping to Strawberry Valley, where he gained rapidly. In the autumn they went down to the town of San Jacinto, where the young man was able to clerk in the bank. When May came they again came to Strawberry Valley, and the brave and independent young sister rented the hotel, which she now manages in such a successful manner, while the young man acts as guide for parties wishing to kill game or explore the mountains. Strange to say, his pulse was only sixty per minute. He did not seem nearly as much distressed as my friend and I. Our evening meal was soon prepared, and never were fried bacon, potatoes and good bread, butter and tea more enjoyed. We unrolled our blankets and lay down under an immense pine tree. The novelty of the situation and the peculiar atmosphere prevented us from sleeping very soundly, and during the night we would from time to time be startled from our slumbers, but the intense stillness and the sight of the Pleiades that watched directly over our improvised bed would reassure us, and we would soon be dreaming of bears, deer, mountains and burros.

At four o'clock in the morning we were up. After feeding our horses and eating a sandwich we started up the last peak. We reached the very top in time to witness the sun rise in his splendor from beyond the Colorado des-

ert that lay spead out below us in its stupendous barrenness. What is that dark, twisting object, about the size and apparently traveling at about the gait of a snail? It comes nearer, and we see that it is a freight train on the Southern Pacific Railroad near Indio. The guide starts a boulder over the eastern slope of the mountain, and we hear it bounding through the awful chasms below. From this peak the ocean can be plainly seen. But space will not permit me attempting a description of what we saw from this wondrous height. On the topmost rock is a fruit-jar, with a cover carefully fitted with rubber, in which every visitor is expected to leave his card, with address and date of visit. The name of Dr. McLean of Riverside alone represented the medical profession, and I proudly put in mine as the second in the list.

Our trip back to Strawberry Valley was enlivened by a mountain thunder and hail storm, but the fir trees were like umbrellas, and protected us.

This trip again revealed to me the wonderful variety of the Southern California climate. If an altitude of fourteen hundred feet is needed it is to be found at the town and vicinity of San Jacinto, while at Strawberry Valley there is an atmosphere redolent with the fragrance of the pine forests, and an altitude of fifty-two hundred feet. At Tauqwitz Valley are all these beautiful surroundings and an altitude of seventy-five hundred feet, and at Tamarack Valley we have again the running streams, the beautiful meadows, great trees and an altitude of nine thousand feet.

Aside from the value of these elevated valleys as summer resorts, I believe they will become even more sought after as winter resorts.

The Alpine winter cure of pulmonary diseases is very popular in Great Britain and on the Continent. Thousands of consumptives flock to the Davos-Platz and Maloja Plateau in the Swiss Alps every winter. Immense and well-arranged hotels have been constructed by rich companies, and wonderful results have been recorded. The following are the altitudes of the chief resorts:

*SWISS ALPS.		†SOUTHERN CALIFORNIA MTS.	
Maloja,	6,000 ft.	Strawberry Valley,	5,200 ft.
Wiesen,	4,771 ft.	Tauqwitz Valley,	7,500 ft.
Davos,	5,105 ft.	Tamarack Valley,	9,000 ft.
Andermatt,	4,738 ft.	Wilson's Peak,	5,600 ft.

From the illustrations I have seen of these Alpine resorts, I judge they are naturally barren plateaus, and have not the wealth of beautiful pine forests that the Southern California valleys I have so meagerly described contain. The advantages of the pine forests are: First, giving a medicated air for constant inhalation; second, adding beauty and picturesqueness to the scenery; third, protecting the valleys from winds. An average of about three feet of snow covers these valleys in winter. In another year they will be much more accessible, as an excellent road is now in course of construction, and I trust that soon capitalists will unite, as in Switzerland, and provide suitable winter accommodations for invalids.

An admirable trail has recently been built from Pasadena to the summit of Wilson's Peak, in the Sierra Madre, and a hotel established, so that the traveler can make the ascent to an altitude of six thousand feet by slow degrees, and find nearly all the comforts of the lowland.

Is the reader of this paper in need of eternal sunshine, everlasting flower gardens, never-fading verdure? He can find them all in California. Does he want rare atmosphere, compressed atmosphere or sea-level atmosphere? He can find them all here. Does he want humid atmosphere or a dessicated atmosphere? He can find them both here. Does he want a climate where the ground is covered with snow the year round, or does he want a climate where the snow never falls? Either can be had in California. "California's climate" can never be described, but much is yet to be written of "The Climates of California."

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*Alpine Winter in Its Medical Aspects. By A. Tucker Wise, M. D. London: J. & A. Churchill, 1886.
†Approximate.

THE BLESSED CORA OF SAN LUIS REY.

By Jeanne C. Carr.

WHILE visiting the Franciscan Missions and old ranches of Southern California in the winter of 1870, I learned that *Cora* is the generic name for an Indian basket; whether applied to one of the richly decorated head coverings treasured as heirlooms in the families of the natives, or to the various and indispensable vessels of basketry in domestic use. And it was in a journey by stage from Los Angeles to San Diego, that I found in a family of Luiseno Indians the oldest basket-maker and the most precious specimen of their handiwork that I have ever seen.

After leaving Santa Ana I was the only passenger, and, with a long night's ride in prospect, I gladly exchanged my inside seat for one on the box, the driver having been recommended as trustworthy and attentive. He soon opened a conversation, as if anticipating my questions.

"Yis, *ma'am;* you bet this ere's a big ranch; 'bout's big, guess's the State o' Varmount. I seen Varmount on yer trunk. This ranch uster begin to the North Pole, 'fore they divided it 'mongst the heirs; an it run beyant the South Pole sev'ral degrees. Don't caount anythin' smaller'n a league here. An' I reckon they'd a made the ranch bigger, ef there'd been *more poles!*"

After a long pause a belated squirrel glided across the road, and he resumed:

"No; they aint a lyin' when th' tells ye that rats lives in trees an' squirrels in th' graound! Truth is, ma'am, this' a orful 'commodatin' kentry! Better not write home 'bout it till ye cuts yer eye teeth! Better b'lieve 'bout half ye hear, cos Injuns an' Mormons, K'nacks an' the ol' Dons, Jews *an'* Chinamen jest runs races a-lyin'! Dunno which beats." And he laughed immoderately, as if this peculiarity had struck him for the first time.

By and by he broke out again. "Yis, ma'am; Californy's the place to settle deaun in! Ef ye aint married ye needn't lose no more time; n' ef ye be, it's the cheapes' place on the footstool to raise a fambly. Wimmen out here don't think nothin' o' twenty children; some goes ez high as thirty an' stops caountin'. Natyves ca'ant count more'n that."

"And have you as many?" I queried.

"Na'aw, I'm a bachilter! I went back ter the States las' winter to try m' luck, an' it didn't pan aout ez I expected."

"What was the trouble?" I asked.

"Wall, ma'am, the gal I useter go to skule with was thar a-waitin'; but she's a perfesser, an' I haint experenced religion."

"Was that all? She might have converted *you*," I suggested.

Disdaining to notice this, he continued:

"You see, ma'am, in them old States the young men don't settle; they kinder *sags down!* Ev'ry thin's so big here, t'wen ye gits there, your stories sounds like lies to yourself w'en yer a-tellin' 'em.

"Wall, I went back, as I said afore, an' ev'ry durned word I told 'em was

true as preachin'. They tuk it all in, 'til one night, when some of the neighbors wuz a-settin' raound the fire, an' I told 'em how I found a taller mine—an' then they sorter lost confidence in me."

"A tallow mine!" I exclaimed. "I have often heard of soap rocks, but never of a tallow-mine."

"Wall, I hev, an' found one within a mile of San Luis Rey."

Here came a degression in favor of the horses, after which my companion resumed in explanation of his discovery:

"Ye see, ma'am, what them old padders did'nt know 'bout findin' work for their subjicks and pervidin' for the saints 'n' angels, not to say thereselves wa'n wuth knowin'. They carried on all kinds o' bizness. Meat was plenty; keepin' an' vittles was to be had at all the missions an' ranches, too, *jes' by settin' round!* The pastures an' hills was alive with horses an' cattle; an' hides an' taller was their coin. They cured an' stacked the hides, dug holes in stiff ground an' run the taller into 'em; it kep' sweet till a ship laid up to Capistrano, *then that taller turned into gold!* They could load up a big ship in a single day, they had so many Indians to help."

"I think I have read something of that miracle in Dana's book," I said, "but I should like to hear more about the wonderful mine."

"Don't know Dany; dessay he wa'nt wuth his keep! One o' them ducks allus hangin' round the *senoritas*, mebbe. They aint all dead yet.

"But *my mine!* Jes' a lot o' thet holy taller, lost'n fergot nobuddy knows how many years. I'd tell ye the hull story, 'ef there war'nt sech a sight o' lying 'bout Californy nowadays," he added, in a more serious tone.

"After one has traveled from Siskiyou to San Diego, nothing that can be said about California seems improbable. Every new country has its unwritten 'Nights' Entertainments,' I suppose."

"Guess thet's *so!* Wall, then, one night I went up into the grass beyant the mission to stake out my hosses, an' when I druv the fust stake it went way deawn, like t'was in soft mud. I jes' yanked it up; haf o'nt was kivered with grease! The evening was cool, but the day had ben brilin', *an' now mebbe ye kin guess how I foun' my taller mine.* 'T was a leetle mouldy on top, but the heft on't waz hard—a reg'lar bonanzy fer a stage driver."

Soon a delightful sea breeze reached us, laden with odors of aromatic plants, and we were nearing San Juan Capistrano Mission, where the stage stopped for meals and to change horses. The tuning of violins and sound of many voices indicated a festive gathering of some importance at the inn, and lest at the hour of midnight live Indians should prove less agreeable than dead ones, I chose to wait among the ruins where so many perished in the earthquake of 1812. During the previous week I had visited the wreck of Mission San Jose, made by the upheaval of 1869, where the venerable Salvador Vallejo was my guide.

The deserted ruins of San Juan Capistrano—the latest and costliest of the missions! Its broken olive mill and crumbling dove-cote and the spacious weed-grown courts and corridors were pathetic witnesses to the grandeur of the plans and purposes of the founders, and also of the rapidity with which nature effaces the noblest works of human hands.

All too soon for the permanence of these impressions, the stage driver's whistle recalled me to my seat. Thereafter several blood-curdling narratives of pioneer experience kept me wakeful, and our way lay along the beach for several miles, where multitudes of sea lions rolled and tumbled in the surf, filling the air with their strange cries, and when, leaving the shore we rose upon the moonlit hills, dark masses of wild cattle sprang to their feet and ran ahead of the stage for long distances, until their leader turned aside to breathe and rest.

When their serried ranks were broken they suddenly disappeared, as if the earth had swallowed them up. In what

seemed to me infinite spaces of sea and land this display of abounding and joyous animal life could not be witnessed without emotions of wonder and delight.

Rain had already fallen in the south, and the morning light disclosed the beginning of that marvelous transformation from dust to flowers, which is so enchanting when seen for the first time. Wild ducks started up from the *lagunas*, and immense flocks of sheep were already feeding on the hills. From afar we heard the sound of bells, and soon caught a distant view of the royal mission, surrounded with its courts and cloisters, crowning a perfect landscape. Emerald waves of grass seemed flowing to it, and fields of young grain stretched away into the distance. As we passed an adobe house near the road, the hymn of the sunrise reached us with its sweet invitation. Innumerable larks were also astir, and pouring out melodious responses to the bells.

And now from a clump of venerable pepper trees a smoke curled upward, and one approached a long low building which served as a wayside inn, a postoffice and store. A dilapidated water basin of stone stood before it in a round patch of neglected grass; not an attractive place, surely, to a hungry and weary traveler. Suddenly the horses were lashed into a run, and we swung twice around the circle, stopping so suddenly as almost to throw me from my seat. Within the inn, to my surprise, a bath was proffered, and a breakfast quickly served fit to satisfy the most fastidious appetite. Excellent coffee, a generous pitcher of cream, *frijoles* and *tortillas*, broiled chickens, rolls and fruit, made us loath to leave so delectable a feeding place.

Giving voice to my satisfaction I was told that the cook was a young Indian girl whose mother and grandmother had served the *padres* in that capacity, in the palmy days of the mission.

I begged to be introduced to her, and with a patronizing little speech in my mind and a bright silver piece in my hand, followed my host into the kitchen, and thus I found her, my incomparable Conchita.

She was making more *tortillas* for a later breakfast, an employment which displayed her superb arms and figure most perfectly. The single massive braid of her black hair fell nearly to her feet when she rose to greet me, and her large soft eyes lit up with pleasure when the landlord told her of my wish to remain for a few days in order to make a leisurely study of the mission and to visit Pala and Temecula, its former dependencies. My intended speech and offering were as much out of place as they would have been in the court of St. James.

"You have the keys, Conchita," said the landlord, addressing her, "and may show the lady the parlor bedroom; at present we have no other." Then turning to me he briefly explained that the landlady being absent on an errand of mercy, Conchita was both cook and housekeeper. "My wife has taught her to read and write in Spanish; the rest of her education she has picked up, no one knows how. She sells goods for me to Indians, Spaniards and Yankees, and you will be able to understand her English, also."

Blushing at this introduction Conchita led the way through a darkened parlor, with a florid carpet and furnishing, to a little room which seemed filled to bursting with an enormous curtained bed. Excepting a small looking-glass upon the wall and some wooden pegs, there was no furniture of any kind. Its single low window opened upon a veranda in the rear.

Already I heard the rumble of the stage; there was only a moment for decision. "I will stay," I said, "if you will share this room with me. Otherwise, I think I must go on to San Diego, and stop here on my return."

"Stay," Conchita answered; "the landlady will come soon, for a baby is born to Pilar already. The mistress is good; she will make pleasant a place. We call her *Madrecita*."

Not without misgivings, I decided to remain until my interest in the fascinating story of mission life should

The Tortilla-Maker.

be satisfied. I relinquished my ticket and bade the jocose stage driver farewell. As the vehicle disappeared the landlord observed, dryly: "Bill Rumsey's a right peart feller, an' a fust-class driver, *but he's the biggest liar on the line.*"

I blushed with vexation, remembering the free entertainment Bill had doubtless enjoyed in so verdant a listener as myself, and mildly retorted:

"He's a Yankee, though, and so am I. It seems pleasant to meet a countryman so far from home." The landlord smiled. "He's a'most anything, 'cordin' to circumstances. His parents is greasers; I've seen 'em. But he's lived mostly with some folks from the Border States."

I checked the impulse to inquire if Rumsey had never found a tallow mine; never had the hairbreadth escapes which it gave me a creepy feeling to remember. I resolved not only to be deaf, but to be dumb forever more respecting the marvels of the Golden State. It comforted me to look toward the mission; to know that it was not a mirage, and there I spent the morning quite alone.

Not yet, however, in the church, or among the surrounding courts and cloisters, for, as I passed it to obtain a view of the massive and well-preserved facade, I saw on the opposite side of the road a broken adobe wall, with an imposing gateway leading to the mission garden.

Passing through this, a flight of twenty or more steps led down to a spring, where I found an old Indian woman washing clothes under a date palm tree—Syria in California. It was useless to question her, so, postponing my search for information, I proceeded to explore the garden as far as it was possible to walk among the cactus growths which overrun this once beautiful retreat.

It was a perfect wilderness of pear, olive and pomegranate trees, originally enclosed by a fence of the agave, or century plant, whose dead blossom stalks, some still green, others silvered by age, now rose like sentinels on every side. At eventide this must have been a lovely and restful seclusion for the fathers, whose days were passed in directing the labors of three thousand neophytes.

Returning to the inn for the noonday meal, I found that the hostess had returned, bringing with her two Indian girls, who wished to trade their fine needle-work for necessary clothing and supplies.

No Irish lace that I had ever seen exceeded this in delicacy, and I took the soft brown hands of the makers in my own, in an ecstacy of surprise and admiration.

The spiders of Italy are made to spin their webs in frames, that artists may paint portraits on gossamer to delight the curious; and I would gladly find words delicate enough to portray Conchita's animated face as she held up the lovely work for inspection.

When dinner was over I made a serious proposal to the landlady for a loan of Conchita for a week or a month, in order that she might accompany me on my visit to Pala, Santa Isabel and other remote Indian villages, and to all the southern missions. Taken by surprise, she replied at once that nothing could induce her to part with the girl, but as long as I remained at San Luis I was welcome to her services. The Indians, Maria and Serafina, would take her place in the kitchen; the house and store she could manage herself.

Conchita was delighted with this arrangement, and after *siesta* we wended our way to the church, the *alcalde*, with his huge iron key, accompanying us. He was old and bent, but his eye was bright, and he had been the only cicerone since the abandonment of the mission as a residence. He seemed to have quite outlived his personal name.

I was fresh from reading all the descriptions of these places to be found in the libraries of San Francisco, and a friend had kindly lent me a copy of Father Palou's narrative, in the Spanish language, of the founding of the missions. With these precious volumes I felt that I might live in the

padres' times, take part in their occupations, and, through sympathy, enter into the spirit of their self-denying labors.

The graves of my kindred had not been made in heathen lands, to leave me indifferent to this earlier consecration.

Nothing in our land, unless it be the Mission of San Xavier del Bac in Arizona, exceeds San Luis Rey in the beauty of its site and proportions. It would seem that the most cherished memories of Old Spain had blossomed here into a more vigorous and healthful life, under the hands of a devoted priesthood.

The walled enclosure contained fifty-six acres, six of these being covered by the sacred edifice, its arched colonnades and the cloisters, in which the fathers lived. The residential part of the establishment being thus secluded, and the discipline maintained effectual, they lived, surrounded by three thousand baptized savages, without a fear.

As we entered the building Alcalde and Conchita dipped their fingers in a consecrated vessel of holy water, and, dropping upon their knees, reverently made the sign of the cross, and as reverently, if not with an equal right, through adoption into their church, I followed their example. All places where man has sought the Heavenly Father have sacredness for me.

Some rude benches stood before the pulpit, otherwise the place was empty, and had not even a picture upon its walls. Beyond was the chapel and altar of St. Louis, the richly gilded statue of the saintly king still perfect in its place. The high, narrow windows had many small panes, and were curtained with cobwebs. The roof of a side chapel had fallen in, defacing a large picture of our Lord, with a golden nimbus, in the act of blessing a crowned and kneeling figure. Here the floor was slightly elevated, and covered with fine tiles. The main building was still in tolerable preservation.

"Conchita," I said, "I shall never be satisfied with looking at this place in this way. I must study it, piece by piece, by daylight and moonlight. Let us go up into the tower, where we can find seats, and with this small telescope we can see the lands where the great flocks and herds were pastured, where the rodeos were held, and the lines of the acequias. To-morrow, perhaps, we will walk around within the old walls and see where the great storehouses were, and where the Indian families lived."

Conchita was translating rapidly, with animated gestures, when she suddenly stopped, and the old man mumbled something which I could not understand.

As the old man searched the dim chambers of his memory and brought forth the relics of the past my imagination reproduced the busy scenes of mission building, when tiles were baking in the kilns, the adobes being molded and laid in long lines to dry in the sun, and scores of oxen dragging in stones for the cloisters and walls.

On yonder side of the square were women carding and spinning wool for blankets, or beating grain for bread, or in the moist gardens, hoeing the beans, squashes and melons.

He says they lived not in families here. At night the men were all locked up on one side of the square and the women on the opposite side, the children always with the mothers. They never ate together. And there were soldiers outside who kept watch all night, and when an Indian who had escaped was brought in he was cruelly whipped. The prison and the whipping place was over there on the south side.

"Were there many runaways?" I asked.

"At first, many. Afterward many were willing to be Christians, when they no longer feared what the sorceress would do.

"The fathers were always going about fearlessly among the wild tribes who had never seen a white man, and teaching them the religion. Only the Cahuillas would never be baptized."

Conchita's face grew serious, almost sad, as she translated the alcalde's words, revealing the darker aspects of the mission administration. Looking out upon the lovely landscape I called her attention to the shadows and their effect in enhancing the beauty of the scene. It was surprising to see how her mind took in the significance of this lesson, applying it whenever an excuse seemed needed for the blessed fathers, so idealized in her pure mind.

On one of these never-to-be-forgotten days, when strangers were in the church, I was writing in my notebook, and Conchita, waiting my pleasure, was seated on the rim of an old fountain outside the door. "Do you live here?" one of the party asked. "No," she replied, "we *live* no more in San Luis. A few of us remain near the graves of our people." As the strangers passed through the building they stopped a moment to express their wonder at the shameful negligence of the authorities, both ecclesiastic and secular, in not preventing the destruction of so interesting a place.

Scarcely had they left when Conchita came in, her cheeks burning and her eyes full of tears.

"They do not know dear lady, *you* do not know how terrible it was for us, the ruin of the missions and the loss of the worship! It was as if the sun had forgotten to rise and set when the people at morning and evening heard not the bells. My grandfather went on board the ship with Father Peyri and brought back his blessing, all he ever had for the work of thirty years! But he had rather have only that than steal from the mission herds and flocks and go into the mountains, as many Indians did, while Mr. Bidwell was here."

Again she asked: "If some American, not a Catholic, or a hater of Catholics, but one well known, who is fair, would tell all the truth to the President, do you not think he would restore the mission and the worship, and give the Indians their little farms and gardens again?"

"He could not, dear Conchita. A president only has his place and influence four years, and that is not long enough to tell the sad story to the millions who make him the father of the people. We can only try to have every one who can read understand the wrong and how to remedy it, and there are many engaged in this work already.

"Did you ever think, Conchita, that our parents give us names which do not fit us when we grow up, and all the time we are perhaps making the names we shall be known by hereafter?"

"Do you like my name?" she asked.

"Very much, because I shall never again listen to the murmur of the sea in a beautiful shell without thinking of you."

That day, as we were leaving the church, I asked where the sacred vessels were kept, and if those described by the earlier writers still belonged to the mission.

"We have been told that the splendid candlesticks, the finest in the country, are in San Francisco. And one of the bells, the very sweetest of all, went there also. Father Ubach brings the rich vestments and furniture for the altar from San Diego when he celebrates mass here, and Maria, the girl you saw at the house, always mends the laces for him."

In the afternoon of the next day, wishing for a diversion after these serious studies, I proposed that we should pay a visit to Conchita's family, the *madrecita* having promised me a ride in her wagon. They lived on the San Luis Rey River, some two miles distant. "Now, Concha," I said, "tell me their names and ages and I will buy a present for each of them at the store." Her delight was unbounded, and she at once began counting them off on her fingers. "My mother, Luisa; my grandmother, Gabriella; her mother, Antonina, and the old Indian woman," she added, hesitating over the last, a many-syllabled name.

"Is it possible!" I exclaimed, laughing heartily. "Three mothers! and is the old Indian woman still another?"

"No one knows who she is; she

speaks a different language. My grandfather found her drifting about in a curious boat near one of the islands when he was a young man. He thought she came from some place in the north; her otter skin robe was so finely trimmed, and the basket hat on her head was all covered with scarlet feathers. There were figures upon it of warriors and of the chiefs they had killed. These had not heads. And she had a silver cross hid in her hair of a shape different from our holy one. She always keeps it near her."

Later in the day we made our selections, Conchita showing much delicacy in respect to the cost of her purchases. Some small black shawls and packages of sweets for the old women, one of finer quality and a silk handkerchief for her mother, cheap hats and toys for the younger ones, was all she could be persuaded to accept. I did not forget to take along a package of cigaritas.

"My dear child," I said, drawn more and more strongly to her, by an irresistible attraction; *what can I do for you?*"

"Keep me near you," she instantly replied. "I would like to live with you always."

For a moment I could not answer. I was a New England woman, and on the dear old farm an untimely lamb was sometimes born in the winter and was cherished by the children, who kept it in a warm basket of wool by the hearthstone. With just such appealing eyes this innocent, virginal soul was looking into my own. I assured her that I would never lose sight of her; never cease to love and care for her. With this she seemed satisfied, and the expression of contentment and peace remained upon her face for many days.

Our ride led through the greenest pastures to the little rancheria, and was a welcome change from the intensity of interest excited by our studies of the mission. But in this nest of tule huts we had touched still more primitive conditions, and opened up a new series.

Old Antonina, baptized at the second mission established by Father Junipero, had gone south with him, and at San Gabriel her daughter was married. Her husband, Gregorio, was majordomo at that place when the orange trees were planted; palm trees and the vineyards. They were delighted to see one who had been there.

"Oh, indeed, those were wonderful days! Did the lady ever see the gardens, with fences of tuña all around, miles and miles of tuña, which a rabbit could not get through? And the shaded walks, with seats all along, and fountains playing everywhere? When they were taken from San Gabriel to build the mission at San Luis, they were so homesick they could not work, pining for the mountains. Did the lady ever see the Mountain of Bonita, and the holy one, covered with snow? There was not one like it in the south; it touched the sky."

I called Conchita to my side. "We must go, now, but I will come again before we go to Pala; perhaps this very week. But lest something should happen, can you take me to see the old Indian woman?"

She at once led the way past a corral, where sheep and lambs lay basking in the sun, to a hut, over which a shelter of brush and poles had lately been made. Beneath it sat a creature so old and wrinkled that one would sooner label her as a dried specimen of humanity than classify her among living beings. She could not see well by daylight, but, hearing Conchita's voice, reached out her small, wrinkled hands.

Conchita gave her a lighted cigarette, whereupon she smiled, nodded and proved herself a human being.

I watched her during the consumption of two other weeds, and then, taking care that no matches were left about, gave her the package, which she hid immediately in the bosom of her gown.

During our ride homeward Conchita told me strange stories of this singular being; how her memory came and went, and how she would sometimes secrete

herself for days where no one could find her.

Returning to the mother lodge, I inquired if the basket worn by the Indian woman when she was found, had been preserved. They assured me that it was in perfect preservation, but they had been unable to find it for more than a year. They were afraid it had been stolen, and they dared not speak about it, for it had been blessed by Father Peyri, and no one who had it would give it up. Luisa said she had prayed and prayed, but the saints paid no attention, and they were too poor to make costly offerings. She feared that the Blessed Cora was lost to them forever.

Stifling as best I could the shadow of a suspicion that this story had been made up for the occasion, we started for home, where a fresh surprise awaited us.

We had arrived in California when the Spanish influence was rapidly waning in the north, but the southern atmosphere was still filled with its customs and traditions. The Spanish and Mexican ladies deserved the lavish praise bestowed upon them by every traveler, and were bright examples to their Indian servants of gracious manners, and devotion to their domestic and religious duties. With many honorable exceptions the code of morals was lower in the masterful sex, and had no punishment for the betrayal of an Indian girl, a fact which accounts for the almost fabulous number of their children at the period of American occupation. Adopted daughters were not rare in the households of the generous senoras.

Returning to the inn, a new phase of southern life had presented itself, in a view of the *caballero* in all his glory, attired in the colors of the rainbow. Under a dove-colored sombrero, richly trimmed with silver lace, an embroidered handkerchief of gay silk protected his neck from the sun. His ruffled shirt was relieved against a blue velvet vest, with silver buttons, over which he wore a bright green velvet jacket, profusely trimmed with gold lace. Green velvet leggings reached down to the shoes, and were thickly sown with silver buttons on the outer seams. His saddle and bridle were in keeping with this fantastic but magnificent costume. In short, this handsome youth, from head to foot, and the spirited animal he rode, from its head to its tail, were unconscious expressions of the rich and joyous life of the land. He seemed hardly more responsible for his actions than a green and silver butterfly fluttering in the sunshine.

All this magnificence was lost upon Conchita, who went directly to our room, where I found her kneeling by the bed, with her rosary in her hands. Not knowing what to say, I was inspired to say nothing, and, softly closing the door, I sought the *madrecita* for an explanation.

"I have been expecting you," she said, "and if you had not come I should have sent for you. I would not let you have Conchita, except for a temporary companion, until I had seen more of you. She is truly a good and self-respecting girl, perfectly faithful to her family and her religion. I do not know how to get along without her, and yet I know this is no place for her. These Indians have no rights, the girls no protection, and the young ranchers and sons of the great proprietors think it no sin to trifle with them. Conchita has behaved with the greatest reserve in my house, and every one respects her. But we are likely to sell out at any time, and then I fear she would not be willing to leave San Luis Rey, and would sink into the dreadful poverty of the others. They say there is a charm in the possession of her family, and I hope to goodness it will keep her from the misfortunes of her race."

"But about this gay cavalier?" I inquired.

"He is no better and no worse than the others. Just for this emergency, suppose you and Conchita set off for Pala early in the morning. The young man will play cards till midnight, and is not an early riser."

"I will think of it," I said, oppressed by a sense of my new responsibility. I went softly back to my room, to find Conchita still where I left her, her face wet with tears.

"Oh, my dear girl, if you are not sick, come outside and see how beautiful the night is! Let us find Alcalde or his daughter and get the key, and have one little hour in the church, under this moonlight. We may go to Pala to-morrow, and never have another chance."

She accepted this proposal without eagerness, as if nothing, even the Madonna, could change the fate which overhung her race. Nevertheless, after a few moments of hesitation she covered her head with a black shawl, and we started for the adobe hut, where the old man was already fast asleep. He grumbled a little at being called into service at so unusual an hour, but was easily pacified with tobacco; while we took a last look at the court, so beautiful, even in its ruins, and the cell where Father Peyri wept and prayed for his deserted flock. I left Conchita there and went inside, seating myself upon one of the benches. An owl that was flying about, finally perched upon the statue of St. Louis; and at that moment I fancied I saw something in human shape creeping along the wall behind the altar. I rose up quickly, saying to myself: "This is all superstition, of course." But as the form became more defined, I saw that it was that of a small woman, who was holding up something in her hand. I could hear my own heart beat, and a little bird, which had built its nest under the roof, chirped and fluttered overhead.

As she drew nearer I heard the words "Cora, Cora," which for an instant I took to be a woman's name, and then I recognized the old Indian.

I had sense enough left to speak to her softly and take her gently by the arm, otherwise she would have run away, leaving the mystery forever unexplained.

During our visit to Conchita's family she had overheard the conversation about the loss of the Cora, which under the influence of her ancient superstitions she had hidden away in Father Zalvidea's grave. This was on the right side of the altar and covered with square tiles.

As she was in the habit of straying off, sometimes disappearing for days, nothing was thought of her absences, and with the ancient cunning of her race she had been able to do this work unobserved. The Cora had been carefully packed in a box of dry leaves. The consecrated earth which she had removed to make room for it she had hidden elsewhere in the ruins.

Conchita's interest in this strange occurrence was now so absorbing that, forgetting the annoyances of the day, she seemed another creature. She eloquently described to me the tender patience with which this woman had ministered to Father Zalvidea in his infirmity. She made the acorn porridge for him fresh every day, for he thought the long life of the oak tree was transmitted through the acorn meal, and believed that was the reason why some of the Indians live to such a great age.

Well provided and mounted we started on our journey to Pala at an early hour, and yielding to my suggestion the *cora* was worn by Conchita in Indian fashion, though partially concealed under the ample mantilla.

The many crossings of the San Luis Rey River were as many leaves in the poem of that delightful southern land. We lunched in one of the canyons, under a sycamore tree of magnificient proportions, leaving our gentle animals to stand in the cool stream or to feed upon the sweet wild grasses as they pleased. I said to Conchita, "There never was a better time for me to hear the story of the Blessed Cora, and I am going no further until it is told."

Conchita began, but oh, how tame the story will sound without the sweet voice and the glowing face with its background of leaves!

"It was made by the mother of Antonina, more than a hundred years ago, she thinks; she is a northern Indian,

and they had the finest baskets and patterns. I do not know if that is true; the rest is."

CONCHITA'S TALE.

"Father Peyri had been sent for in haste to go to Pala, where an Indian chief was dying. He had been sick, the good father, but taking with him a flask of wine and the viaticum and leaving an order for my grandparents to follow him, he reached the Pala mission in time to comfort the departing soul. When all was over he started to return. There was a very bad place in the road where torrents of the previous winter had washed out some large trees. When he reached this spot a large and fierce mountain lion sprung upon his horse and all three were struggling in confusion on the ground.

"The father tried in vain to regain his feet, only to find his body pierced with excruciating pain. He would have given his life to save the poor creature that had served him so faithfully, and he cried to God for Jesus' sake to spare the innocent beast. Like St. Francis, the dear father loved the animals. He called the sun his mother and the moon his sister."

"Oh," I interrupted, "St. Francis is my saint of saints."

"Senora, *there never was a saint more holy than Father Peyri!*

"My grandmother did not receive the father's order to follow him until a late hour, and then there was no horse or mule to ride, so she started on foot. She was wise from a young child, and could see things to which others were blind. Voices from the spirit land directed her steps and made her helpful to all. She walked so fast that she was out of breath and the drops of sweat fell from her face, but still she toiled on for twenty long miles, until by the roadside she found the good father lying prone upon the earth. She ran to him and threw herself with cries upon his body, for she thought he was dead. She kissed his hands, they were not cold, and then she held them within her own, praying to the Holy Virgin to save him. Faint as a sigh came from his pale lips the words, 'Agua! Agua!' and the poor creature sprang to her feet.

"There was not a manadero or a drop of water within reach; it was far below this, where the river crossed the road. But she did not hesitate. She pulled off her jacket of rabbit skin and put it under his head and ran down the trail as fast as she could. The road seemed to grow longer, and as she stopped a moment to recover her breath, she heard crunching sounds and stopped quite still; it was the lion and his mate devouring their yet warm victim.

"The thickets were very dense below her, but she kept on, more cautiously. Now she heard the drip of water from a little rivulet falling on the rocks near by, and reaching it, she fell down, exhausted.

"A short rest and a copious draught restored her strength, and filling her basket cap with water she retraced her steps, feeling in her soul an assurance that she would find the dear father yet alive. How carefully she put the precious cup to his lips, so that not a drop was spilled! And the water revived him so that he could speak and tell my grandmother where to find the wafers and wine.

"That is how it all happened that Father Peyri blessed the Indian basket, and that it is very precious to my family."

More than twenty years have passed since these happenings. I wonder if the sycamore tree has been cut down; if since the hills are stripped of their timber, the stream is quite dry in the early summer; if the basket is in some curio collection. But this I know, to my great sorrow: there is a cross of white marble in a certain Catholic cemetery inscribed only with the text, "Blessed are the pure in heart." It marks the grave of my Conchita.

A CALIFORNIA DEER HUNT.

By Theodore S. Van Dyke.

BRIGHT days were those when the breeze came fresh and fair from off the tumbling sea, tempering the sunshine that streamed upon the dreamy hills of summer in the southern part of California, and making a day among them at that time of the year when the deer are at their best a pleasure instead of toil. But scarcely less pleasant, though not so certain for success, were those winter days after abundant rains had washed the land and the sun fell with milder beam from a bluer sky.

For nearly a mile we had followed the trail of a large deer from where he had stopped feeding in the morning. to the top of a ridge, on the other side of which the land fell away to the distant sea in long, undulating lines of green and gray, red, brown and blue, all bathed in the soft light of the westering sun.

And what better place for a well-bred deer to doze away the mild hours of a midwinter day than the potrero into which we now looked down—one of the little mountain gardens, guarded on three sides by a ring of majestic live-oaks, and opening on its lower side toward the great watery plain that shimmered along the western horizon and then, falling away into a deep canyon with miles of winding timber in its bottom? And what better time for such a deer to rise from his long nap than just as the sinking sun was bridging with golden sheen the vast expanse of water on the west?

As I was about to remark to my companion that deer have a provoking habit of ignoring the fine places you find for them to spend the day in, and prefer to make their own selections, there was a sudden roar of wings from the shining green of a bush of heteromeles down in a little grassy flat in the potrero, and dozens of lines of whizzing, wheeling and squealing blue started out of it for as many different points of the compass. But the flock of quails thus disturbed flew to such a short distance and showed so little fear of the bush that it was evident their alarm was precautionary, rather than genuine. In a moment more there was a faint motion of the scarlet berries that hung in dense, shining clusters everywhere amid the glistening green of the spreading bush, followed by a light gleam of something smooth along its outer edge. Faint and short it was, but very much like the play of light that sometimes comes from the polished horns of a deer.

Soon there was a second glimmer, a trifle broader than before, but with a softer play of light, such as sometimes comes from glossy hair under the softened beams of the setting sun. And then the canopy of green above it stirred again with a movement, faint, indeed, but still much stronger than could be made by any bird among the branches, or the gentle breeze that was playing across the land from the peaceful sea far away below.

Suddenly, along the outer edge of the bush, where its nodding clusters of crimson seemed to merge into the golden glow of the violets that were beginning to light up the green carpet of the slope beyond, there was a slight glitter from something harder than hair, and this in a moment was followed by another, and that at once by another, and still another, until into full view came a pair of branching antlers. Behind them came slowly into sight a pair of broad, gray ears, and in front of the horns, framed in light gray, was a broad, black forehead, running down into a fine tapering nose of almost jet black. Then followed a neck thick and proudly erect as that of the war-horse of poetry, expanding into a

plump, thick-set body in dark, glossy gray.

All this as it appeared through a strong glass. The deer was not near enough for those who know the deceptive nature of a long shot at game, especially down hill and over an unknown distance, and I and my companion knew that the picture would be different through the sights of a hunting rifle, and with the sun shining full onto them. Still something must be done quickly, for the sun was fast flooding the deep canyon far below with rosy mist, through which the winding lines of sycamore, cottonwood, willow and alder that marked the watercourses at the bottoms of the ravines between the soaring hills were fading fast from sight, and the light green of the lilac, manzanita and other bushes that robed in dense chaparral thousands of acres of the hills below, was changing rapidly into blue.

Having completed his getting up from his midday nap our deer pricked up his ears, struck a majestic attitude and with an air of great wisdom surveyed the landscape around, then giving his stubby, little black tail a complacent wiggle, as if sure no danger lurked on land or sea, he bent down his head and began to nibble some of the lucern that was casting a yellow tinge over the grayish green of the chemisal. Then, suddenly, he turned about, and through the tall, gray stalks of the white sage, over which the trailing vetch was climbing in a chain of carmine, purple and green, he started off on a slow walk.

We had decided that, long as the distance was, it would be better to risk a shot at the game than to take the chances of approaching nearer. To approach the deer directly within range of his eyes would have been out of the question, and the making of a detour among the rocks and brush of the surrounding hills was even more uncertain, especially when the course he would take was not yet determined. In the mean while the haze that was flooding the valleys below was fast turning into a deeper shade of crimson, and the sinking sun would soon play too much in the sights of the rifle when pointed down hill toward it. We therefore decided to try a shot from where we were.

But to do this it was necessary to consult the deer's convenience. For anything like a certain shot at such a distance the target should be perfectly still, and standing still was exactly what the target would not do, for about the time I had gauged the distance and adjusted the sights for it, the deer moved behind the bright green curtain of a large sumach. Behind this he stood out of sight for a moment, but moving some of the branches in a way that showed he was nibbling some of the twigs from it, and then he moved slowly out and across a bit of open ground, carpeted with tall bunchgrass, and then under the dense canopy of a huge liveoak. Here he stood for a while in shade so deep that he would have made too indistinct a mark for even a much shorter distance. He scratched one ear with his hind foot, reached up and nibbled some of the leaves from the lower limbs on the outer edge, and then went on to the next tree, where he bent his nose to the ground, as if looking for acorns. All this was giving but little opportunity for a shot, and all the time he was going farther away. But a few hundred feet farther on, the lilac, manzanita and shrub liveoak formed a dense chaparral along the hillside, in which he would be lost to sight, and even on the more open ground the orange floss of the dodder, twining in such masses over the tall buckwheat and lucern, was almost enough in itself to hide the buck unless the sunlight played just right upon his coat.

After spending a few minutes under another tree and keeping us in great suspense, the deer started toward the point of a long ridge on one side. Soon nothing was in view but the glittering points of his horns rising and sinking among the brush as he walked along nipping a bunch of leaves here and there, and presently a larger mass of dark green chaparral closed over

him, leaving the world around us very lonely. Toward the coast we could see the wild geese in long, dark lines high in the sky, winging their clamorous way above the bright green plains, and through miles of air fell the weird, penetrating *g-r-r-r-o-o-o* of sandhill cranes circling in long crescent lines far in the zenith. From the basin below us the clear call of the quail ran along the hillsides, and we could see quails trotting here and there in dark blue lines among the openings or covering the greensward in dark bunches where they ran together. But still the world seemed lonesome without a sight of that buck, and the prospects of never seeing him again began to grow alarming.

The whippoorwill, a soft grey fluff of delicate feathers, was pitching in the air around us with soft, plaintive *mew, mew, mew*; the great islands of Santa Catalina and San Clemente were fast growing darker, while the broad stream of radiance that flowed landward from the horizon was rapidly brightening, and our only prospect for even another sight of the game was to reach at once that part of the ridge toward which it was moving.

We went as fast as the granite boulders that studded the ridge and the long outstretched red arms of the manzanita would permit, startling from the wild cherry the brown thrush and cutting short the tide of song he was pouring forth over what is here the opening of spring instead of the coming of winter, and sending the little blue hare of the hills scurrying with rapid foot and flickering white tail among the bunches of maidenhair or gold fern that were springing up between the rocks.

Before going far we looked over the ridge into the place where we had last seen our game. But there was little sign of life except the bluish line that through the deepening crimson of the air below marked the arrowy flight of the turtle dove, the twittering that came from the ruby throat of the linnet, or the joyous flow of life from the golden breast of the meadowlark. Despair was about to master us when my eye suddenly caught a bit of sheen that changed too quickly to be explained by any change in the position of the sun. Nor was it from the smooth leaves of the evergreen *yerba santa* nor from the showy wild gooseberry that was getting ready to blow its crimson trumpets in the spring, for in a moment it shone again, and the gleam thereof was broader and brighter than before, unmistakably from hair. And beside it from the perennial green of the shrub liveoak came surging up a dozen glittering points and the big ears and the fine dark nose were again pointed for a moment at the different points of the compass and then again disappeared from sight into where the acorns were still clinging on the lower branches. The game was nearer the point of the ridge than before and again we sped along. Before us the chaparral cock broke into reluctant flight and sailed across the next ravine with long, fanlike tail outspread; the ground robin checked his bubbling spring of self-satisfaction and fled silent to the thick cover of the ceanothus; the sparrow flew chirping from his nest among the springing poppies, and the wee little wren left his new house that he was building in the fragrant green wealth of the black sage, and soon we reached a point that afforded another good view into the potrero.

But not a beam of light was there from anything save the orange glow of the mimulus where its bright corolla hung out from among the chinks in the piles of granite; not a glitter from anything save the white, fleshy leaves of the cotyledon, the toughest of the stonecrop family, that was living in luxury upon the hardest and driest tables of granite. So we hastened along, for the hum of the bee was already dying out along the chaparral, and from the dome of heaven in long and graceful curves, the condor was winding down to earth to roost.

Suddenly I saw where the fern-like leaves and pink blossoms of the alfileria had just been bent to earth beneath a fine-pointed hoof, and before I could beckon to my comrade there was a heavy *bump, bump, bump, bump*, upon

the ground in the brush ahead of us. Each sprung at once into position, to look over the wealth of green by which we were surrounded, and I reached the top of a flat boulder just in time to see a whirl of gray some seventy yards ahead vanish in the green at the crack of my companion's rifle, and another close beside it, clear in a shining curve, the broad, scarlet top of a low photinia that filled the space between two boulders. Then, at an angle to its former course, the first gray rose again on high as another *bump* resounded from the ground, and as the mellow light of the sinking sun played full upon its side we saw, for a second, against the distant background of sky, the clear-cut outlines of a two-year-old buck. Bang! went both rifles almost at once and too hastily aimed. *W-h-e-e-e-o-o-o* went the lead, singing away on high as it glanced from the smooth surface of the granite boulders around the path of the deer, and the game descended into the chaparral with a heavy bump that indicated sound legs and a still healthy anatomy above them. As it disappeared the other one rose again on another tack, this time under the different play of light on its coat, dark and glossy as the curve of a porpoise tumbling through the waves, and just as it cleared the top of an ambitious young wild currant, *bang!* went my companion's rifle again, and the gray descended with a heavy crash of brush, instead of the clear *bump* we had heard before.

Little time was there for thought, for the rapid *click, click,* of our repeating rifles, as the empty shells flew hot and whizzing in curves above our heads from the speed of the ejectors, was not so quick as the surging again above the brush of the other deer. Up he came with all four feet grouped beneath, ready to strike the ground like springs of steel at his descent and throw him again aloft as lightly as a sunbeam glancing from a wave. *Bang!* with both rifles almost together, but as the beamy pelt sank into the brush there came back the firmest of thumps from the hard ground and up came the gray again before our quickest motions could work the rapid mechanism of our repeaters. There was something about the firmness of the *bump* that followed its descent this time into the brush that fell heavily on our hearts. But, just as our rifles were reloaded and ready, the shining fur, surmounted by small horns and large ears, pointed skyward, loomed up again more symmetrical than before in clear outline against the glistening side of a great boulder of smooth granite. From this the lead flew in hissing flakes around the deer, causing it to wheel like a flash and dart off almost at right angles to its former course, and at a pace more rapid than before. As a boulder parting from its anchorage of ages on some steep hillside in full headway bounds in whizzing curves through the brush as well as over it, so went this deer at first down the slope on the east. As my companion's rifle rang out he changed his course again with sudden whirl, and no longer with high and swinging bounds, but hugging the ground like a racer, as this bounding deer can do when he tries, he clove the densest green of the chaparral almost as easily as a cannon shot. Dark with speed the game passed the first two openings in the brush before either rifle was ready. In a second more it was lost behind the light green of a lilac and then glimmered for an instant in the opening between that and the brilliant red berries of a large heteromeles. It was a desperate chance, but the only one left, and dropping the line of the rifle sights into the blending colors of the heteromeles full eight feet ahead of the rushing line of fur I pulled the trigger.

Was it fancy, or was there in the crack of brush that followed something different from that made by a healthy deer as he merely touches it in swift career? A heavier crash of brush that soon followed gave the answer. We took the trail, and in a few yards the hoofprints showed signs of unsteadiness; in a few more they became wilder and more plunging, and in a few more we found our deer lying heels upward and head foremost in a bush.

But what of our buck? We had now as much game as any mortal should want. But we had come a long way for this hunt, the season was about over, and it would be months before we would have another hunt. So we thought we would at least take a look and see if the shooting had scared him, although in those days deer were so tame that they were not easily alarmed by shooting, especially when the conformation of the hills made it impossible for them to tell where the noise came from.

Looking over the ridge into the main basin where we had last seen our deer we saw nothing. Still we concluded to go down into it a little way, at least, to see what had become of the big buck. Scarcely two hundred yards had we gone, down a little swale, when a young setter dog I was training to point deer, and had so far kept close at my heel, suddenly stopped, and, tossing his nose high in air with inquisitive sniff of the evening breeze, began to look very wise. Some two hundred yards ahead were two or three acres of ground covered with a dense grove of liveoaks and other trees, where there was probably a spring and plenty of thick underbrush in which this buck in the years gone by had probably whiled away many a summer day.

As we neared the place the action of the dog showed plainly that the deer was there, but whether within or along the edge we could not tell. So we made a circuit of the surrounding slopes to see, and with the understanding that if he was not along the outer edges I should enter the timber from below, while my friend should watch for him on a point that commanded a view of the direction in which he was likely to run when I entered the cover.

A circuit of the slopes around showed nothing but a large, red-tailed hawk sitting in a sycamore among the timber, and a wildcat on the hillside that twitched his bobtail out of sight into the brush in a twinkling. Going around to the lower end of the timber I threaded my way among the tall spires of the arrow-grass and through fragrant ranks of wild celery that stood almost as bright as in the noon of summer. Water-cresses lined with green the little stream that gurgled through it, and the wild pea was unfolding its gaudy banners over the fallen log beside which the columbine and the tiger lily were drooping after their long period of bloom. A large flock of mountain pigeons, driven down by the snows in the higher ranges, burst with clapping wings from the liveoaks at my approach and circled away upward to where the sunlight shone upon the burnished lavender of their breasts; the white-barred owl, with his ape-like face, stared at me from the limb of the cottonwood, and the large ground-squirrel scampered away over the carpet of leaves beneath the liveoak, but no place ever looked less like containing a deer.

Just as I had about concluded that the buck was skulking in the dense cover—a trick this deer knows right well how to do—my friend's rifle echoed along the hills. I ran at once for the hillside, and reached it in time to see a ball of glossy gray fade into the brush at the second crack of my companion's rifle, and sent a bullet from my own in ahead of it and where I thought it would be by the time the ball arrived. A crack of brush followed the report and sent hope soaring high, but in a moment more the deer came bounding out of a little gulch upon the hillside as gracefully and easily us the wave surges from what but the moment before was the trough of the sea. Here he cleared with lofty bound a granite boulder, there he skipped gaily around the next one; now he turned with easy curve to leave some bush on one side, and then over the next he went as lightly as the shadow of a passing cloud.

Too far for a fair shot when we first saw him, his jumps were now so irregular and the distance increasing so fast that the prospects of hitting him were very slender, and our only hope was in speed of fire. So the rocks along his course were warmed with

lead that hissed and sang through the air above and beyond; yet he quickened not his pace. The larger hare fled in a flash of yellowish brown from his path, the raven, with guttural croak, wheeled away upward out of all danger to his glossy coat, and the buzzards slowly circling in to roost in the timber, sought other quarters at once. But our deer waltzed away up hill over the rocks and brush as gently as a beam of the rising sun plays from crest to crest of the chains of hills, until a dull click announced that the magazines of our rifles were empty. Then on he went from the shade in which our part of the scene was now wrapped into the sunlight along the upper slopes where the big rocks glistened and the chaparral was a brilliant green instead of darkly blue; yet his coat outshone it all, as the rosy light played upon it, and never seemed game so fair as when he reached the top of the ridge and, wheeling half round, turned his broad ears and great branching horns full upon us with inquiring gaze, while the sunlight glittered from every polished tine as he stood clear-cut against the mellowing blue of the eastern sky.

THE HISTORY OF CITRUS FRUITS.

By William A. Spalding.

THE erudite Mr. George Gallesio, author of "The State Council and Sub-Prefect of Savona," in his preface to a learned treatise on the citrus family, written sixty years ago, says:

"Of all the plants spread by Nature upon the surface of the globe, there are none more beautiful than those we know under the names of citron, lemon and orange trees, which botanists have included under the technical and generic name of Citrus. . . . In a word, these trees charm the eye, satisfy the smell, gratify the taste, serving both luxury and art, and presenting to astonished man a union of all delights."

The opinion of Mr. Gallesio has been shared by all civilized races since the days of the Crusade. The citrus family has a quaint and curious history. It is supposed to have originated in Southern Asia, and in that portion of the East Indies lying beyond the Ganges. In its primitive form the orange is believed to have been a bunch of pods attached at a common center on the end of a stem, each pod inclosing a small quantity of pulp and juice and several seeds. In a process of evolution, occupying nobody knows how many centuries, these pods gradually grew together, uniting at their edges and forming the complete spherical fruit. But the rudimentary divisions still remain, although the pericarp has disappeared from the inclosed surfaces and only a thin membrane remains. Sometimes we see an orange "sport" which shows a tendency to draw in the pericarp along meridianal lines, as though the fruit were attempting to divide itself into pods again; sometimes we see a "sport" in an elongated pod-like form; sometimes a protuberance from the blossom-end of the orange assumes such a shape. All these show the tendency of the fruit to revert to its original form—a bunch of pods.

When Mohammed extended his conquests into Asia he discovered citrus trees in their native habitat. Impressed with the beauty and fruitfulness of the trees, the Arabians disseminated them by carrying seeds to Arabia, Syria and Palestine. In their westward incursions they also introduced the trees in Africa, Spain and in some of the European islands. The Arabs invaded Sicily about the beginning of the ninth century and planted orange and lemon trees on that island. That the orange had at that time been transformed from its original apocarpous or pod-like form to a sphere is attested by Abdallatif, an Arabian writer of the twelfth century, who refers to the "round citron" (*otridj modawwar*). He says it was brought from India subsequent to the year 300 of the Hegira (A. D. 922). It was first served in Oman, Arabia; from thence carried to Irok, Persia, and finally introduced in Syria, becoming very common in the houses of Tarsus and other frontier cities of Syria, at Antioch, upon the coasts of Syria, in Palestine and in Egypt.

Next came the Crusaders as disseminators of citrus trees. Entering Asia Minor as conquerors, they spread out as adventurers and traders through all parts of Asia. They were not slow to discover and appropriate such choice fruits as the orange and lemon. Sicilians, Genoise and Provencals transported to Palermo, St. Remo and Hyeres trees of the citrus family. Jacques de Vitry, a historian of the thirteenth century who accompanied the Crusaders to Palestine, thus quaintly describes the newly found fruits:

"Besides many trees cultivated in Italy, Genoa, France and other parts

of Europe, we find here (in Palestine) species peculiar to the country, and of which some are sterile and others bear fruit. Here are trees bearing very beautiful apples—the color of citron—upon which is distinctly seen the mark of a man's tooth. This has given them the common name of *pomme d'Adam* (Adam's apple); others produced sour fruit, of a disagreeable taste, which are called *limons*. Their juice is used for seasoning food, because it is cool, pricks the palate and provokes appetite. . . . There is a species of cedar called *cedre maritime*, whose plant is small but productive, giving very fine fruits as large as a man's head. Some call them citrons, or *pommes citrons*. These fruits are formed of a triple substance and have three different tastes. The first is warm, the second is temperate, the last is cold. Some say that this is the fruit of which God commanded in Leviticus: 'Take you the first day of the year the fruit of the finest tree.' We see in this country another species of citrine apples, borne by small trees, and of which the cool part is less of a disagreeable and acid taste; these the natives call *orenges*."

It was at this period that the orchards of Europe gained as accessions from the Orient the damson plum, the St. Catherine pear, the apricot and other valued fruits.

From Sicily the Roman States and the islands of the Archipelago first received their orange and lemon trees. Thus Sardinia, Corsica and Malta were first stocked with fruit trees which have ever since been of the utmost service to their people of those islands.

The lemon was first cultivated in Europe for the use made of its juice as seasoning for food and in confections, which became very popular in Europe on the introduction of sugar. Afterward both orange and lemon trees were grown largely in gardens for ornamental purposes. The monks planted them in the courts and grounds of their monasteries. An aged tree which stands in the court of the convent of St. Sabina, at Rome, is accredited to the planting of St. Dominick about the year 1200.

The æsthetic fancy spread to colder latitudes where citrus trees could not exist the year round in the open air, and this first led to the establishment of hot-houses. These, in France were called *orangeries*, and in the fourteenth century they were regarded as an almost indispensable adjunct to the gardens of princes and nobles. In the fifteenth century *orangeries* or hot-houses became more common and were much in vogue with people of the wealthier class, chiefly in countries where a covering of glass, without other artificial heat, was sufficient to protect the trees.

It remained for the eighteenth and nineteenth centuries to disseminate citrus trees to countries best adapted to their cultivation in the open air, to produce the fruit in quantities and introduce it to the world as an article of commerce. The age of romance made an æsthetic use of the trees; our more practical age has converted them into an agency of money-getting.

We now find citrus trees cultivated for profit in the following countries:

In the Riviera, South Coast of France, along the coast of the Mediterranean, over one hundred varieties are grown; not only are the oranges exported as fruit, but orange-flower water is distilled from the flowers, and both flowers and fruit enter largely into other manufactures. Consul Bradley reported in 1890 that one firm alone used 700,000 pounds of flowers for this purpose. Tons are can-dried green. Neroli, a popular perfume, is extracted from some varieties.

The orange is extensively grown in Spain, the favored localities being along the Mediterranean, in the provinces of Valencia, Andalusia and Barcelona. The islands of the Mediterranean have become famous for their citrus products, Corsica, Sardinia and Sicily being best known. The Italian oranges we receive come mainly from the districts of Carrara, Genoa, Naples and Verona.

Oranges come from various parts of the Levant; the Azores, 800 miles

west of Portugal; from Asia Minor, especially from Smyrna.

In Palestine the principal groves are at Jaffa, while some are found at Gaza and about Jerusalem. The fruit grown inland is inferior.

Smyrna is famous for its orange and lemon groves. In Beirut and vicinity varieties, sour, sweet, and mandarins occur. The best fruits are grown along the sea; few trees being found in the interior valleys. Haifa, Mersinia, Sidon, Tarsus, Tripoli and vicinity are all famous for their groves.

In Nagpur, India, several choice varieties of oranges are grown, none of which are familiar to us by name. Here there are two seasons for ripening fruit during the year. The finest fruit is obtained from flowers that open in June and July. This fruit is on the market from February to May. The other flowering takes place in February and March. This ripens from December to February. But the same trees cannot produce fruit in both seasons without great detriment to both fruit and trees.

In Philippine Islands, off the coast of China and India, five varieties of orange and four of lemons are found. They grow wild in the jungles and are cultivated to some extent, but the fruit is not of a character to invite exportation. Consul Webb, of Manilla, says: "I am quite sure there is not a native orange or lemon that would compare at all favorably with the ordinary products of Florida and California."

Australia is gradually becoming an important field for citrus fruits, especially in the colonies of New South Wales, Queensland and Victoria. The areas under crop and the produce are as follows:

			Gross Produce.
Colony.	Year.	Acres.	Dozen.
New South Wales..	1889	10,851	19,693,580
Queensland	1888	1,068	742,417
Victoria.....	1888	34	.....

Consul Griffin says:

"It is probable that when the returns for 1889 for Victoria are available they will show a very large increase, for since the inauguration of irrigation colonies there, large areas of orangeries have been planted at Mildura and elsewhere. The orange and lemon tree is also being planted on a large scale at the newly established irrigation colonies in South Australia."

Of Cape Colony, Africa, Consul Hollis says: "The time was, and not so long ago, when the orange crop of this colony meant a grand revenue to the farmer. With the advent of the Australian bug, Vedolia, all this is changed, and in place of trees loaded with luscious fruit, now only remain a few blackened stumps to show where the trees once stood. No systematic effort was made to eradicate the pest, A saying it was useless to struggle against the evil, while B, whose orchard was close by, gave the bug free license to breed and multiply."

In Morocco only seedlings are grown, and these in great variety. Water is raised for irrigation by animal power.

At Bahia, Brazil, oranges are grown only for home consumption. Sweet and sour limes are also produced. In British Guiana, tangerine, bitter, sweet and myrtle oranges are grown. No irrigation, no pruning, no fertilizing. Limes abundant and cheap, but no lemons. In Ecuador thick and thin-skinned, sweet and sour oranges and limes are grown. The yield of oranges by number is about 1,500,000 per annum. Of lemons about 30,000 were exported in 1890. In Venezuela oranges are grown for home consumption only; they do not thrive near the coast, but in interior valleys. Lemons and limes are also grown. Oranges also grow in a wild state in all favorable localities of Central America, though they are not cultivated or exported. At Guerrero, Mexico, sweet and bitter oranges, navel oranges, lemons, limes, shaddocks and citrons are grown. Some 15,000 boxes of limes, representing for the growers a value of about $25,000, are exported annually, per steamers of the Pacific Mail Steamship Company to San Francisco. Only small quantities of oranges are exported to the same market from De-

cember to February, before other supplies are available. In Sonora, oranges were introduced by the Jesuit fathers, ninety years ago, but they were grown only for home consumption until four years ago, when the advent of the Sonora railroad gave an impetus to the industry by furnishing a means of export to the United States. In 1888 14,000 boxes of 200 oranges each were shipped. Orange trees grow along the sea coast and in the interior up to 3000 feet altitude. The trees are budded and irrigation is practiced. Lemons and limes are grown to a limited extent. There are no insect pests.

In Lower California oranges are grown at San Antonio, San Jose and La Paz. Consul Viosca says: "The citrus family comprises here six species fruitful and profitable for cultivation: citron, shaddock (toronja), large lemons, limes (citrus limetta), lima, sweet lime, king orange. The *lima chichona*, or sweet teat lime, weighs commonly from twelve to fourteen ounces and is very delicious. The king orange is the production of an orange tree, a young shoot grafted into a sweet lime tree, and in time from that to a shaddock or toronja, and finally a shoot from this last is again grafted on a common orange tree. Each of the orange fruit weighs from four to five pounds, and is of very delicate and sweet flavor and also exempt from acid."

Oranges grew quite extensively in Bermuda until the trees were destroyed early in the sixties by the cottony cushion scale. In Dominica orange trees are not cultivated, but grow promiscuously throughout the island. The fruit begins to ripen early in September and continues until the end of November. In Jamaica the fruit grows wild and without other cultivation than keeping down the bush. But the cultivation is regarded as secondary to the use of the land for cattle or sheep pasturage, and the care and handling of the fruit is, as a rule, of the roughest and most careless description. In Trinidad and Guadaloupe much the same condition obtains. In Cuba no regular system of cultivation of oranges and lemons for export is followed. The only plantings are in scattered spots about the buildings of small proprietors. The trees seldom receive the care of good husbandry, and whatever surplus arises in this way over local demand is sold to gatherers, who ship it to the United States.

In Porto Rico orange trees grow all over the island and are cultivated. No irrigation is necessary. Each tree in full bearing is estimated to yield from 1,000 to 1,500 oranges, the surplus crop being exported to the United States.

Formerly oranges were grown quite extensively in Louisiana, but during the last decade the trees have been repeatedly frozen down and the industry is now practically destroyed. Florida and California produce the bulk of home-grown oranges. On the character of the industry in these two States it is unnecessary to dilate here.*

Coming now to the subject of citrus fruit culture in California, we will attempt only a cursory glance, considering the general conditions as compared with those which obtain in other countries. It is not the object of this paper, even if the space allotted were sufficient, to enter into details of propagation, cultivation, varieties, picking, packing, shipping, etc. There is much which might be said about the planting of the seed; much about the nurture of the little sprout—about budding, pruning, cultivating, fighting the enemies of citrus trees, and, finally, about securing revenue from the well-earned fruit. One reason why there is so much to be said on all these branches of the subject is because orange growing is a work of the head no less than of the hands; indeed, without the head-work the hand-work is more than likely to be thrown away. Another reason is because citrus culture in California is wholly dependent on artificial conditions. Citrus trees are not indigenous to our soil, nor are our seasons

*In a future number will appear a fully illustrated article on the culture of the orange as carried on in California from Marysville to San Diego.

suited to their growth without some very material assistance rendered by man. A seed dropped by the wayside will not spring up unattended and in time produce a bearing tree, as it would in the hummock lands of Florida or in the perpetually moist soils of lower Mexico and Central America or in the West Indies. Every citrus tree brought to a state of fruition with us, from Marysville to San Diego, involves more or less attention and labor; and, generally speaking, the more suitable and painstaking this attention is the better the tree and its products.

At first glance these artificial conditions under which we are obliged to labor would seem to be a great disadvantage. But they are not. On the contrary, they form one of the strongest guarantees we have of the success of the industry. One can see at a glance that, if oranges were growing wild in half the mountain canyons and along the streams, so that anybody could have them for the picking, there would be no stimulus to individual effort; there would be no selection and propagation of fine varieties; the markets would be demoralized and, in short, a great, well-organized industry, as we have it to-day, would be relegated to the limbo of forgotten things. In general, that calling which offers ample rewards for the most unremitting care and toil will elicit the most thought, and the most thought brings the most progress. It was among the well-tended farms of a little island off the English coast and on the dearly bought flats of Holland that the Jersey and Holstein breeds of cattle were developed—not on the great plains of Texas, where stock grows without any care whatever. Let us, then, take heart of our many disadvantages—those which involve the most toil and worry—and assure ourselves that they are blessings in disguise. If our conditions are artificial they are, nevertheless, the very best. For example, instead of planting our trees on perpetually moist land, which is apt to be too cold, and therefore to lower the standard of the fruit, we may select the warm upland and supply artificially just as much moisture as the tree requires to bring it to perfection. We are thus independent of seasons of drouth, and we have no seasons of flood that trouble our groves. Our long summers give a maximum of sunshine which the tree requires for its healthy development and the production of high-flavored fruit.

In a word we may justly felicitate ourselves on the fact that in methods of citrus culture California leads the world. The choicest varieties from every quarter of the globe have been introduced and are treasured and propagated in accordance with their value and adaptability to our soil and climate. Our methods of propagating, cultivating and treatment of fruit are the most advanced. In fertilizing we were somewhat derelict a few years ago, depending rather too much on the natural fertility of soil and the stimulus from irrigation; but much attention is now given to fertilizers, natural and prepared. Science is here made the guide, counselor and friend of the industry, and the cultivator now has available every means of fertilizing the soil which the most progressive horticulture can suggest.

In the matter of combating insect pests, science has again been our best friend, and we have practically, and, it is hoped, permanently secured the mastery.

Our markets are principally in our own country, and there is still a wide margin for growth in shutting out foreign importations, with the great advantage of a tariff in our favor. If the home-grown product does not yet half supply the consumption of the country, there is every incentive for doubling the production. Besides, the market is one which will grow with what it feeds on. The United States is constantly increasing in population, wealth and luxurious taste, and the demand for those standard luxuries—oranges and lemons—will grow with the general advance.

In orange growing, taking into account the vast acreage planted, but not yet in bearing, we are much nearer the natural limit of supply and demand than we are in the production of lemons and limes. I look for an immense stimulus in the planting of the acid fruits within the next few years.

There is still a good field of profit in manufactured products of citrus trees which has yet hardly been entered upon. In these branches we need to take lessons from the South of France. Why should we not utilize the tons of orange blossoms which our trees produce in surplus of all fruit requirements almost every year? From these the French make orange-flower water, perfumes and confections. From the rinds of the fruit they extract essences and oils; from the pulp they make marmalades, glaces and confections.

The juice of lemons and limes is the basis for important articles of commerce in some countries, being either shipped in the liquid clarified form, or converted into citric acid. The advantage of these manufactures is that they largely utilize what would otherwise go to waste, and all revenue received from them above the cost of labor and machinery is clear gain. A South of France province would grow opulent from the refuse citrus products of California.

THE WOOING OF THE BIRDS.

By Henry Grant Curtiss.

TO say that the courtship of the birds is a caricature of the grand passion of the human race may not be strictly true, yet when the wooing of our feathered friends is compared to that which holds among men, the similarity of method, the amusing analogies constantly met with, create the impression that the same general principle holds to the same extent in both. That birds literally fall in love, are consumed by jealousy and are impelled to destroy their rivals, pine, and even die when separated from the object of their affections must be conceded; while the same methods which are employed by human lovers to win the affections of the opposite sex are often reproduced with the greatest fidelity. Certain paroquets, known as love-birds, are well known for their singular demonstrations of affection one to the other, a greater portion of their time being occupied in delicate and amorous attentions; and that the love between them is intense, has been shown in several instances where the male has pined away and died when separated from his mate.

In human courtship the fair one is won by many blandishments and arts the prototypes of which may be found among the birds. The human lover, as a rule, endeavors at first to attract the attention of the object of his choice by carefully decorating his person, paying particular attention to his toilet and costume, well knowing that in many instances the female eye is caught by the man of fashion, while the one who neglects his habiliments is passed by with scant notice. The human lover uses his voice, serenades his mistress and touches the guitar or lute beneath her window. He haunts the localities which she frequents, and exhibits himself whenever occasion offers, by various methods striving to create the impression that physically he is superior to other men. As the acquaintance progresses he lavishes upon her gifts of flowers and beautiful objects of various kinds, suggestive in their nature of his growing passion. If he is an athlete he gladly welcomes some contest in which he can exhibit his courage, and where he can demonstrate his prowess, enthused by the presence of his lady-love. In the old days as a knight he wore her colors or flower at the tourney, and defied all comers, while in modern times the same spirit actuates him, finding its expression in different fields.

By those methods he wins her esteem and finally her affections, and secures the prize, often bearing her off in spite of the most violent opposition. Among the lower tribes of men much the same means are employed. In some cases the wooer is obliged to prove his ability to support a wife; in others the lover steals up to the village of his beloved, and, watching his opportunity, fells her with a club, and with the assistance of his "best man," bears her away. Kissing is often a feature of courtship among the civilized nations of the earth; among the native Australians it is not known. Among some races the maiden is placed on horseback and becomes the bride of the man who catches her. The courtships and love customs among mankind differ very materially, yet in almost every instance there is a striking parallelism with the love actions of some of the birds. The latter court the females with an ardor that cannot be misunderstood; exhibit their personal attractions, their gorgeous feathers and tints, endeavor to gain their affections by the presentation of flowers and bric-a-brac of various kinds; treat them to dainty tid-bits of food with much ceremony and circum-

stance, serenade them with notes vocal and instrumental, and endeavor to win them by bursts of song and melody. Many birds go through marvelous performances, trials of grace, strength and endurance before the opposite sex; try conclusions with rivals, and fight them to the death. Certain birds, conspicuously the pigeons, kiss each other during the season of courtship, and various others caress the bills of their lovers with their own. In short, almost the complete line of attack made by the human lover upon the affections of the object of his choice is found among the birds.

The brutal method of obtaining a wife by the use of a club finds a prototype among some of the woodpeckers, where several males not only fight among themselves, but pursue the fair one until she is completely exhausted. From tree to tree she is chased by a vociferous throng and terrorized until finally she is reduced to the extremity of accepting the aid of one of the lovers, whereupon the two turn upon the rest and beat them off. In certain human tribes the wooer must not simply secure the affections of the fair one, but must satisfy her family, by various tests, that he is fitted for the responsibility. His general appearance, stature, muscular development, ability to work and fight are all taken into consideration, and if he passes all the tests he secures the object of his choice. In other tribes, notably those of the Dyaks, the attentions of a lover would, some years ago, not have been received unless he could show a goodly collection of human heads. Those who have noticed the courtship of cranes and herons will note an interesting instance of a methodical exhibition of physical agility. The actions of the sandhill cranes while engaged in their courtships are, perhaps, the most interesting. At the pairing, or mating time, numbers have been seen to congregate, evidently for the especial purpose of testing their several claims to the attention of the fair ones who stand near by in groups. An acquaintance of the writer owned a farm in one of the Western States where these birds came to nest yearly, and from the concealment afforded by a haystack was witness to some remarkable exhibitions on the part of the amorous feathered swains. At certain times they assembled in groups of from ten to twenty, standing for a while erect like statues. Suddenly a bird would leap several feet into the air, coming down gently with half-spread wings, to run around with bill lowered, as if pretending to search for something which evidently existed in its imagination alone. After running about the crane stops suddenly, giving way to another bird, that leaps into the air so vigorously that it fairly clears the back of a comrade, then dashes away, pirouetting, dancing, fluttering its wings, throwing itself into endless positions calculated to attract the attentions of the demure females. The movements of these birds are infectious, and are followed by others, and soon a number of cranes appear to have either gone mad or to be engaged in a contesting dance. Some trot around in a circle, others run quickly, some jump into the air as if hopping on one foot, the entire performance being a most ludicrous exhibition in which what are usually sedate and dignified birds appear to have lost their reason.

These dances, at least in certain cases, are a prelude to the mating season, being a literal exhibition before the females. The writer has been fortunate in observing the love antics of the great heron, its dances being almost identical with those described, and among many of the group this curious love-making may be observed; that of the Demoiselle crane (*Tetrapterix*) being perhaps the most remarkable. The courtship of these birds is so singular that, were it not authenticated by careful observers, the recital might well excite suspicion. According to Prof. Van Nordmann, the Russian naturalist, the cranes are first observed in Southern Russia in the month of March, at which time flocks of several hundred begin to arrive for

the mating. They are now seen standing about in groups and gathering in bands every morning and evening, when they go through performances that can only be compared to methodical and carefully prepared dances or an elaborate minuet, having for its object a display of the rare beauty and agility of the males. A level, flat stretch of land is selected for the exhibition, generally along the edge of some stream. Here the cranes place themselves in line or in rows, as the case may be. "They dance," says Van Nordmann, "and jump around each other, bowing in a burlesque manner, advancing their necks, raising the feathers of the neck tufts and half unfolding the wings. In the mean time, another set are disputing in a race the prize for swiftness. Arriving at the winning post, they turn back and walk slowly and with gravity, all the rest of the company saluting them with reiterated cries, inclinations of the head and other demonstrations, which are reciprocated. After having done this for some time, they all rise in the air, where, slowly sailing, they describe circles, like the swan and other cranes. After some weeks these assemblies cease, and from that time they are seen constantly walking in loving pairs together." That this exhibition is closely associated with the selection of mates is, in fact, a part of their courtship, there can be but little doubt.

Equally singular is the courtship of the cock of the rock, according to Le Vaillant. The bird is found in South America, and in former years its reddish-yellow feathers formed one of the imperial robes of State. At certain times, previous to the pairing, the birds meet in a given locality, as if by previous arrangement, and form an irregular enclosure or circle, in the center of which a bird takes its place as a performer does in the circus, walking around and around, lifting up its feet, stretching its wings from side to side, extending its head, hopping this way and that; in short, doing its utmost to exhibit itself to the assembled audience. When the performer is thoroughly exhausted it retires, and its place in the ring or arena is taken by a fresh contestant for honors that, with different methods, seeks to make an impression upon the group of females near at hand. One after the other the birds go through this singular dance that is supposed to be a part of the courtship of the birds and which can but call to mind similar exhibitions among human beings.

Audubon refers to what he terms the love antics of the wild goose, and describes its courtship. The love-making of the humming bird is often accompanied with contests between the males, resulting in the death of one or both. What is supposed to be the courtship of the Peruvian humming bird (*Loddigesia mirabilis*) has been observed by a naturalist. It is carried on in the air, the bird stationing itself immediately below a limb in the air and remaining in one place with its tail feathers spread out so that they appeared like a twig upon which it rested, and were at right angles to the body. When exhausted the birds would return to a branch to rest, to again take their places in the air, occasionally changing places, both endeavoring to display their magnificent plumage. Their crests of vivid sapphire-blue, breasts of golden green, with ruffles of white about their feet, made a most attractive spectacle. The contests of these little creatures sink into insignificance beside those of the ruff—a wading bird—which, at the time of courtship, becomes a knight errant, throwing down the gauntlet to any and all comers. So pugnacious is the ruff that it has certain places set apart for its duels, where the males meet upon the field of honor and settle their disputes to the bitter end.

Of all the bird-lovers the small and remarkable group known as the bower-birds and their allies astonish us by what may be termed their æstheticism in love-making. No human lover of culture and refinement approaches the

subject with more deference to the tastes of the fair one than these bird courtiers that captivate the object of their devotions, not by brutally following them around from tree to tree, but by erecting elaborate structures, garnishing them with ornaments from the bird point of view, solely for the purpose of producing an effect upon the æsthetic sense of the female. The love of finery, of beautiful objects, of self-decoration, is inherent in human life. The dusky savage wooer presents the father or the family of his lady-love various gifts, and later makes offerings to the fair one herself. The lover high in the scale of civilization considers gift-making an essential of the wooing—a feature that custom sanctions, and of two lovers, the one whose delicate attentions, expressed in gifts of flowers, jewels, books and other objects of use or bric-a-brac, will in many cases be received with the greatest favor. The lover thus gives a tangible and delicate expression of his emotions. His gift is a token of his regard, and may be interpreted in various ways, while its very character may imply a delicate compliment to the recipient. By gifts of flowers he recognizes her love for the æsthetic and beautiful in nature, and is but following out a plan of seige upon her heart as old as the hills themselves. The object of the young man's affection is taken to balls, festivals, fairs, the theatre or circus and to various places of amusement, the wooer often actuated by the sentiment that he can insensibly place her under certain obligations which will assume the form of a reciprocation of the fervid sentiments which inspire him. Do we not find a parallelism in the bower-birds and their cousins? These birds are surely the cavaliers, the gallants of bird creation. They are knights in all the term implies, and are possessed of romantic and æsthetic dispositions. They lay at the feet of the objects of their devotion pledges that are at once complimentary and delicate recognitions of a love for the beautiful. The perfection of this bird courtship, where the highest æstheticism is expressed, is found in the actions of the little bird known as the "Gardener," or *Amblyornis inornata*. The circumstance is so remarkable that the first reports were considered the efforts of some vivid imagination or the improbable tale of some native wag; but finally no less an authority than Count Rosenberg, the Dutch naturalist, came forward and described the home or hall which the bird builds and in and about which its courtship is carried on. The first published account was given by Dr. Beccari, the Italian naturalist. In traveling through the interior of New Guinea he finally came to the Arfak Mountains, where his observations were made. One day, having left the party and wandered away by himself, he came upon a miniature cabin standing in the midst of a little meadow of green, studded with flowers. The resemblance to a play-house carefully built by some intelligent child was complete. The entire structure was artificial; even the meadow was formed of moss brought from a distance for the purpose and carefully arranged and kept clean. The cabin was about three feet in diameter, having the stalk of a tree running up through the center and formed of the stems of an orchid (*Dendrobium*.) The bird or birds had selected a small shrub, which had a trunk about the size and height of a walking-stick. Around the base of this moss was packed, forming a cone five or six inches across. Against the central trunk, about a foot and a half from the top, the stalks of the orchids were laid or leaned, being placed regularly so that an opening on one side, or door, was left, a horseshoe-shaped interior being the result. All this is wonderful enough, but Dr. Beccari suggests that the orchid was especially selected for raftering, on account of its disposition to live and grow after being transplanted. In any event, such is the case. The sticks or stems are interwound with grasses by the birds, and the whole roof grows together so that it is waterproof, and is a complete residence with a semi-circular interior,

a door and a lawn. When the structure is complete the bird proceeds to ornament and decorate it, gathering choice and highly colored flowers, scattering them upon the lawn or meadow, or fastening them in the sides of the house, so that the structure gives the impression of having been decorated by some tasteful human hand. Referring to this, Dr. Beccari says: "But the æsthetic tastes of our 'gardeners' are not restricted to the construction of a cabin; their fondness for flowers and for gardens is still more remarkable. Directly in front of the entrance to their cabin is a level place occupying a superficies about as large as that of the structure itself. It is a meadow of soft moss, transported thither, kept smooth and clean and free from grass, weeds, stones and other objects not in harmony with its design. Upon this graceful green carpet are scattered flowers and fruit of different colors in such a manner that they really present the appearance of an elegant little garden. The greater number of these ornaments appear to be accumulated near the entrance to the cabin. The variety of objects thus collected is very great and they are always of brilliant colors. Not only does the *amblyornis* select its ornaments from among flowers and fruit, but showy fungi and elegantly colored insects are also distributed about the garden and within the galleries of the cabin. When these objects have been exposed long enough to lose their freshness, they are taken from the cabin, thrown away, and replaced by others." It was not the good fortune of Dr. Beccari to observe the bird in its cabin, but he ascertained that the latter was distinct and separate from the nest, which was built in a tree and that the cabin was exclusively a place of meeting for the sexes, or a hall of courtship. The natives called the bird the *tukan-kofan* or gardener bird, and rarely destroyed the little cabins when they found them. The Papuans, who are also familiar with it, call it the master bird or *buorungurd*, and believe that the house is erected as a place where the male can present gifts to the female. That the flowers are placed there purely as ornaments is shown by the fact that in the rear of the house is a heap of withered flowers, which have been deposited there to make place for fresh and more attractive decoration. In all lower animal life this is perhaps the most remarkable exhibition of a taste that approximates that known as æsthetic among human beings. The *amblyornis* is a small bird, about half as long as a robin, a rufous-colored little creature whose general appearance gives no suspicion of its wonderful architectural attainments. What human lover gives more delicate attention to his lady-love? The bird-lover not only pays assiduous court, but he builds a house for the especial convenience of his lady-love; embellishes it with beautiful works of nature, and amid the most romantic surroundings pays his addresses. The human lover goes to remarkable extremes during the courtship, but he has yet to erect an art gallery for the express purpose of carrying on his devotions.

When the satin bower-bird, *Ptiloonorhynchus violacens*, falls in love, the preparations for the capture of its mate are almost as remarkable as in the case of the gardener bird. Years ago, when Europeans first penetrated the Australian bush, they heard accounts from the natives of birds that built houses, but thinking them simple exaggerations, paid but little attention to them. Finally reliable naturalists took an interest in the matter, and it was ascertained that certain birds of the country not only built nests, but more or less elaborate houses, or runways, for the purpose of gratifying their æsthetic tastes and those of the females. Mr. Gould, the well-known ornithologist, first examined these bowers, as they are called, in the cedar-brush of the Liverpool Mountains, and several of the structures, with all their art treasures, may be seen in the collection of the British Museum. Mr. Gould found the bowers of the satin bird generally in the shade of some tree in a retreat not easily

found. The first act of the bird is to collect a number of twigs and sticks, which it places upon the ground with some regularity, winding them in and out, forming a platform, or floor, upon which the bower is to be built. The timbers selected for the sides are lighter than the others, slender and flexible, and are taken separately by the bird and thrust into the platform, so that they bend, or curve, inward, almost meeting. A row of these extends a greater or less distance, as the case may be, or according to the taste of the builder, and then a row is placed on the opposite side, or the two walls may be framed at the same time, the twigs being arranged at a regular distance, and inclined so that they nearly, if not quite, meet at the top. When completed the hall, or structure, is a tunnel of twigs, the latter all carefully arranged so that the branches or crotches are upon the outside, offering no obstacle to the birds as they pass up and down. The bower-bird does not stop here. It has erected a structure that is far ahead of the houses of some savages, and now proceeds to demonstrate that it possesses that which the savage has not—a love for the beautiful, an æsthetic taste well shown by the decorations of the hall of courtship. What may be termed bird bric-a-brac is now collected; any bright object which would attract the attention of any ornament-loving female is seized and brought to the hall; bright feathers are attached to the twigs; white or bleached bones of singular shape are hung on the crotches; attractive shells are strewn about, some birds exhibiting a special liking for one object, some for another. A certain helix or white snail shell is found in the hills, often by the dozen, while bits of red flannel, pieces of glass and quartz are always present if the bower is in the vicinity of a camp. So well is the habit of the bird understood by natives that if any small object is missing the bric-a-brac heap, or collection of the bower-bird, is examined, and the article is possibly discovered. In one instance a brass button, a piece of shining tin, a stone tomahawk and a tobacco pipe were found in one bower, having been collected from time to time by the birds. The bower completed, and its ornaments hung and placed in position, the birds run and hop through it, chasing each other about, showing their delight in many ways; picking up the various objects and changing them about to suit the fancy and caprice of the moment. The satin bower-bird that thus goes a-wooing is a richly hued bird as large as a magpie, the prevailing tint being a satin-black, while the female is a grayish green, with a pale, yellowish tint beneath. It must be conceded that a bird that attempts to influence the object of its affections by appealing to her love of the beautiful must possess more than ordinary intelligence—at least a marvelous resemblance to the workings of the mind in lovers of a much higher degree.

Equally singular is the courtship bower of the spotted bower-bird (*Chlamadera maculata*). While the satin bower-bird is found between the mountain ranges and the coast, this little builder, with its lines of black and rose-pink feathers, lives in the interior regions. Its bowers are larger and longer than the one described, being in some instances more than three feet in length. In its general formation it is the same, the walls being formed of twigs, but provided with an inner wall, or tapestry, of rich grasses, so arranged that the heads, or tops, mingle and join together. In the arrangement of this inner lining of grasses there is an exhibition of remarkable intelligence. The ends are not, in every instance, thrust into the ground, and would not retain their upright position were not some especial expedient adopted. This consists of weighting the ends of the grasses down with stones or pebbles, which the birds collect for the purpose, each straw having its stone. The latter, according to Mr. Gould, who discovered the bowers and watched the birds in them, diverge from the mouth of the run on either side, so as to form little paths through

which the birds run. The bric-a-brac collections of these birds are often immense, when the size of the bird is considered, and many of the articles must have been brought six or seven miles. While the ornaments are scattered along the hall, the greatest number are found at either entrance, where a heap is often discovered, made up of shells, bones, roots of curious shape, snails, white or curiously colored pebbles, seeds,—in fact, anything that is sufficiently curious to attract attention. The specimens of these birds kept alive at the London Zoological Gardens do not nest, but they have given many exhibitions of building the halls of courtship, being provided with materials for the purpose, and when complete they would run through the tunnel, uttering loud notes. There are several other species which might be mentioned which erect bowers, or houses, separate and distinct from the nest, into which the female is beguiled and won by what is evidently an appeal to her love of finery and the beautiful.

No one could watch the courtship of the albatross, known familiarly as the mollymawk, and believe that birds have not an equivalent for kissing. This bird (*Diomedia culminata*), is about as large as a goose, nearly pure white, with a yellow patch or streak on the sides of the head. Even after the pairing the courtship is continued—a lengthened honeymoon, as it were. The birds having paired, select a place for the nest, which is a cylindrical mound of grass and clay about ten inches in height, with a slight depression on top for the egg, which is, in reality, held in a pouch. The female sits on the nest, and, according to Professor Moseley, the naturalist of the "Challenger" expedition, the male stands beside her and pays her assiduous court. Professor Moseley watched the birds and observed what he terms a curious courtship. The male stretches out his neck, erects his wings and feathers a bit, and utters a series of high-pitched, rapidly repeated sounds not unlike a shrill laugh. As he does this, says Professor Moseley, he puts his head up close against that of the female. Then the female stretches her neck straight up, and turning up her beak utters a similar sound, and rubs bills with the male again. This maneuver is constantly repeated. If this is not kissing, as kissing goes, what is it? The naturalist of the "Challenger," in referring to the courtship of the great albatross (*Diomedia exultans*), says: "The male, standing by the female on the nest, raises his wings, spreads his tail and elevates it, throws up his head with the bill in the air or stretches it straight out forward as far as he can, and then utters a curious cry, like the mollymawk's, but in a much louder key, as would be expected from his larger larynx. Whilst uttering the cry the bird sways its neck up and down. The female responds with a similar note, and they bring the tips of their bills lovingly together. This sort of thing goes on for half an hour or so at a time."

Equally as curious is the courtship of the long-billed and pouched pelican. The voice of this bird resembles the sound produced by a person with asthmatic symptoms, and the vocal part of the courtship brings forcibly to mind the earnest conversation of two victims to this malady. The birds caress one another with their long beaks the while, ruffle their feathers and wag their heads in a ludicrous manner. The courtship is carried on either when swimming about or upon the bars and islands these birds affect. The nests of the bird, or at least those observed by the writer, are remarkable for their roughness, resembling an armful of refuse dropped promiscuously into a low mangrove tree. The eggs are held by a special dispensation of Providence, apparently no attempt being made to form a hollow or receptacle, the big blood-flecked eggs being simply caught in the crevices or held by sticks or weeds—the flotsam of the Gulf Stream.

In the courtship of many birds there is employed a combination of

vocal and instrumental sounds. This is true of the grouse. In the spring the males produce curious notes caused by the inflation and contraction of their gular sacs. In the sage-cock the latter are large and conspicuous and covered with a bright yellow skin. The sound comes as the sac is inflated, and the air slowly exhausted. There is heard, low at first, a deep, hollow tone, penetrating and resonant as it increases, resembling the sound made by blowing violently into a hollow tube or reed. In this manner the booming love-calls of the prairie chicken are made. Others, as the blue grouse, utter a sound resembling the whirr of a rattan cane; the sound being produced by the inflation and contraction of two orange-colored sacs.

The courtship of the black-cock is a most interesting performance. The birds gather in large numbers at the time, the assemblies being known in Sweden as an "Orrlik" or "Lek." An open or clear spot is generally selected, where the males strut about, going through a number of maneuvers intended to attract the attention of the females. The male makes every attempt to display his attractions, stalking about, ruffling up its wings, with head high in air, in a manner at once pompous and laughable to the bystander, who is, perchance, playing the part of Paul Pry upon the bird comedy in real life. Occasionally the wooer stops, stands silent for a moment, then comes the "boom," "boom," which proves to be a summons to the opposite sex or a call, the attractions of which they cannot resist, numbers gathering to listen to the serenade, after which the pairing begins and numerous matrimonial alliances are consummated.

The love-making or courtship of the magnificent capercaili (*Tetraus Urogallus*) of Scotland is always watched with interest by sportsmen and lovers of birds. The bird is a grand creature —easily the king of the tribe it represents, and, by its size and handsome appearance, considered one of the finest game birds ever known. It is found in the pine forests, and generally by the end of March begins its courtship, which results in each male obtaining several mates. When engaged in its ante-nuptial love-making the capercaili takes its position in a clearing in the forest, or at other times on the upper limb of a lofty pine. His object now is to attract the attention of all the females of the vicinity and by his vocal and personal attractions secure their affections and captivate them. It raises its head, utters a note which sounds like "pellep," repeated several times at near intervals; gradually the bird becomes absorbed or carried away by its refrain; highly excited, its body sways to and fro; sounds like *kiliekop* come from its inflated throat, and then with head thrown back and tail raised it utters in impassioned strains the notes, *hede*, *hede*, *hede*. So engrossed is the wooer at this time that it is utterly carried away and becomes oblivious to its surroundings. The "spel," as it is also called, is repeated until in response the females gather from the surrounding bush and gaze at his splendors. Our lover is a jealous fellow, allowing no intrusion upon his supposed rights, attacking other males that venture too near or join in the serenade or love-calls.

The drumming of the ruffled grouse is a familiar sound to those who follow this fine game bird, and it may be heard at various times during the year. Exactly how the sound is produced is something of a mystery. While producing it the male usually stands upon a fallen tree trunk, and, stretching himself in a horizontal position, beats downward with its wings, holding them rigid. The blows are first given with deliberation, but gradually the bird becomes excited, and they become more rapid, finally producing a peculiar, far-reaching, falling sound, which not only has a decidedly penetrative faculty, but combines ventriloquistic features, as the bird is difficult to place, the sounds appearing to come from several places at once. There is no little difference of opinion as to the way the sound is

produced. Some careful observers believe that the wings strike the flank only, while others are equally positive that they strike each other over the back, while many sportsmen and persons familiar with the birds, claim that the wings are struck against the tree, so producing the notes. The movement of the wings is so rapid that it is almost impossible to determine how the sound is made. In the breeding season it is a call to the females, yet is used at other times. The great capercaili is a polygamist, a Mormon among the birds, proud in the possession of a harem, while the allied jungle fowl (*Gallus ferrugineus*), is, it is believed, monogamous in its wild state, preferring the customs of the highest type of mankind, and happy in the possession of one wife. Drumming as a means of calling and captivating mates is not confined to the grouse alone. The fine pheasant (*Euplocamus horsfieldi*), with its bluish-black tints and ornamental tail, found at a high altitude in Asia, drums loudly. This serves also as a challenge, and many males collect to dispute the right of the drumming *kallege*.

That the feathered wooer depends upon its personal appearance to captivate the female is well known. As a rule the male is a magnificent creature, bedecked in plumes and colors, especially adapted to catch the eye of the demure, somber-colored female. The peacock, the male of the Argus pheasant, and the cock lyrebird are examples, where the tints, colors and designs are indescribable in their beauty. Among the pheasants the male is a superb creature, the female altogether unattractive. The courtship of the Crimson Tragophan (*Cerzornis*) is accompanied with a personal display of charms which characterize the bird as a feathered Beau Brummel. Rich in coloring, it also has two fleshy horns capable of being erected on either side of the head, while pendant are wattles of brilliant hues which can be raised and rendered more conspicuous. The courtship begins in April, the males now calling their mates, enticing them by their love-notes and serenades to some clear spot in the woods of the lofty altitudes of India or China, where they are found. There, as a naturalist has said, the males begin to "show off" before the females. A cock walks up and down in an excited manner before a group of females, displaying all his charms of color to the best advantage, and then having probably made a selection of a female the ardent lover literally throws himself at her feet, or to be exact, places himself before her in a crouching position. The tail is stretched along the ground, the head jerked violently from side to side, forward and back, to display the gorgeous wattles. This concluded the lover brings the rich colors of his wings into play by unfolding and causing them to vibrate, the tints and hues blending and flashing in a manner that must dazzle the eyes of the demure and homely female. Now the neck of the crouching lover seems to dilate; the horns upon the head stand erect and vibrate with emotion, and the bird finally springs to his feet, becoming at once not a supplicant but a grand creature, proud in his beauty and confident in his power to fascinate and please, and that the conquest is complete there can be but little doubt.

The most remarkable adornment among birds is found in the birds of Paradise, the plumes, remarkable colors and pink legs of some of the males rendering them extraordinary objects, especially when compared or contrasted with the demure and unattractive females that are possibly aware of their inferiority, as in some cases, and especially in the emerald bird of Paradise (*P. apoda*), the females become the wooers—a leap-year-like performance that has been described by M. Lesson, the French naturalist. The females collect in flocks in lofty trees and cry out in concert to their lovers, which later, are seen in the midst of a seraglio of fifteen or more females, displaying their charms. By a vibration of the entire plumage the male thus on exhibition raises his feathers, until the long delicate plumes of the side sur-

round the bird like a golden halo, in the center of which, says M. de la Presuage, the bright green head forms a disc, looking like a little emerald sun, with its rays formed of the feathers of the two plumes.

The courtship of many birds is carried on in the air, and is an aerial exhibition of evolutions of great boldness and beauty. The snipe and various other birds perform remarkable gyrations at the mating-time, while the woodcock, the goatsucker and many more have been seen undertaking feats of singular grace and beauty. How necessary an exceptional personal appearance is in the bird world of love and courtship is illustrated by many cases where a flock of wives has deliberately deserted the male for a more resplendent husband. A flock of ducks in the lake at Central Park, New York, deserted the male, being captured by a wild and richly hued drake that alighted among them. The old bird made every attempt to drive away the new-comer, but without success. The females were captivated, and ignored him completely. The late Charles Darwin says: "That Lichtenstein, who was a good observer, assured Rudolph that the female widah bird (*Chera progne*), deserted its mate when the latter lost the fine tail feathers with which it was ornamented, during the mating season." Dr. Jahger, Director of the Zoological Garden at Vienna, states that a male silver pheasant that had been triumphant over females was superseded by a rival immediately upon accidentally losing its tail feathers, which constituted its chief attraction. Fine feathers not only make fine birds, after the old adage, but successful ones in love and questions of the heart, and it need not be said that these instances of faithfulness find their prototypes in many lovers of a much higher degree.

THE DESERT SEA.

By H. N. Rust.

THOSE who have crossed the American continent in imagination only, know its desert as a yellow patch on the map. Those who have crossed it in the body will recall a vast expanse of sand, level and deserted, hot, but not dangerously so, yet hot; a region that in its most cheerful spots has a grotesque cactus vegetation, and in others is devoid of growth, and sinks away in depressions several hundred feet below the sea.

The desert between Yuma and the mountains of Southern California is especially barren, abounding in level stretches, and several of the stations are two hundred and forty or more feet below the level of the sea. The most important stations in the desert are Salton and Indio; the former being remarkable for its salt beds, while the latter has earned no little reputation as a health resort. Both are in depressions and literally situated on an ancient ocean, or estuary bottom. The beds of salt indicate that ages ago the ocean covered the locality, and the old coast line can be easily traced along the edge of the desert, eighty feet in height above the present level, showing that at one time a vast and deep body of water swept over the spot. Near Salton the surface is covered for miles with a deposit of white shells, that gleam and shimmer in the sunlight like snow, and in some places they are blown up by the sandstorms of the desert in winrows. The meaning of this is that some time in the past, as suggested, the locality has been the bottom of a large body of water, the waves of which beat against the fronts of the Southern Sierras.

In walking along the edge of these mountains the old water-line can be readily seen, indeed, even from a long distance, winding in and out among the inequalities of the main range, where it fronts the desert. The most interesting portion of this ancient sea is a valley about sixty miles in length by fifteen miles wide, through which the Southern Pacific Railroad winds its way after leaving the Pass of San Gorgonio. This valley is nearly surrounded by mountains, those on the west attaining an altitude of over two miles, being snow-capped in winter, presenting a magnificent picture as the tourist approaches over the dry, sandy waste. Deep canyons reach up from the beds of the seasonal streams, winding up the summits, affording scenery of a grand and striking nature. One of these canyons is famous for its palms, many of these giants being seen growing there, fighting for life amid the dry and arid surroundings. It might be termed the death valley, as life is rarely experienced, yet in it live the Cahuilla Indians to the number of four or five hundred, the tribe amounting to nearly one thousand in all. Why the Indians prefer this hot place it is difficult to say; that it is healthy there can be but little doubt, the great age attained by many of the Indians attesting to this. One chief, Cabazon, died here in 1848, it is said, at the age of one hundred and forty years, while many instances are known of centenarians.

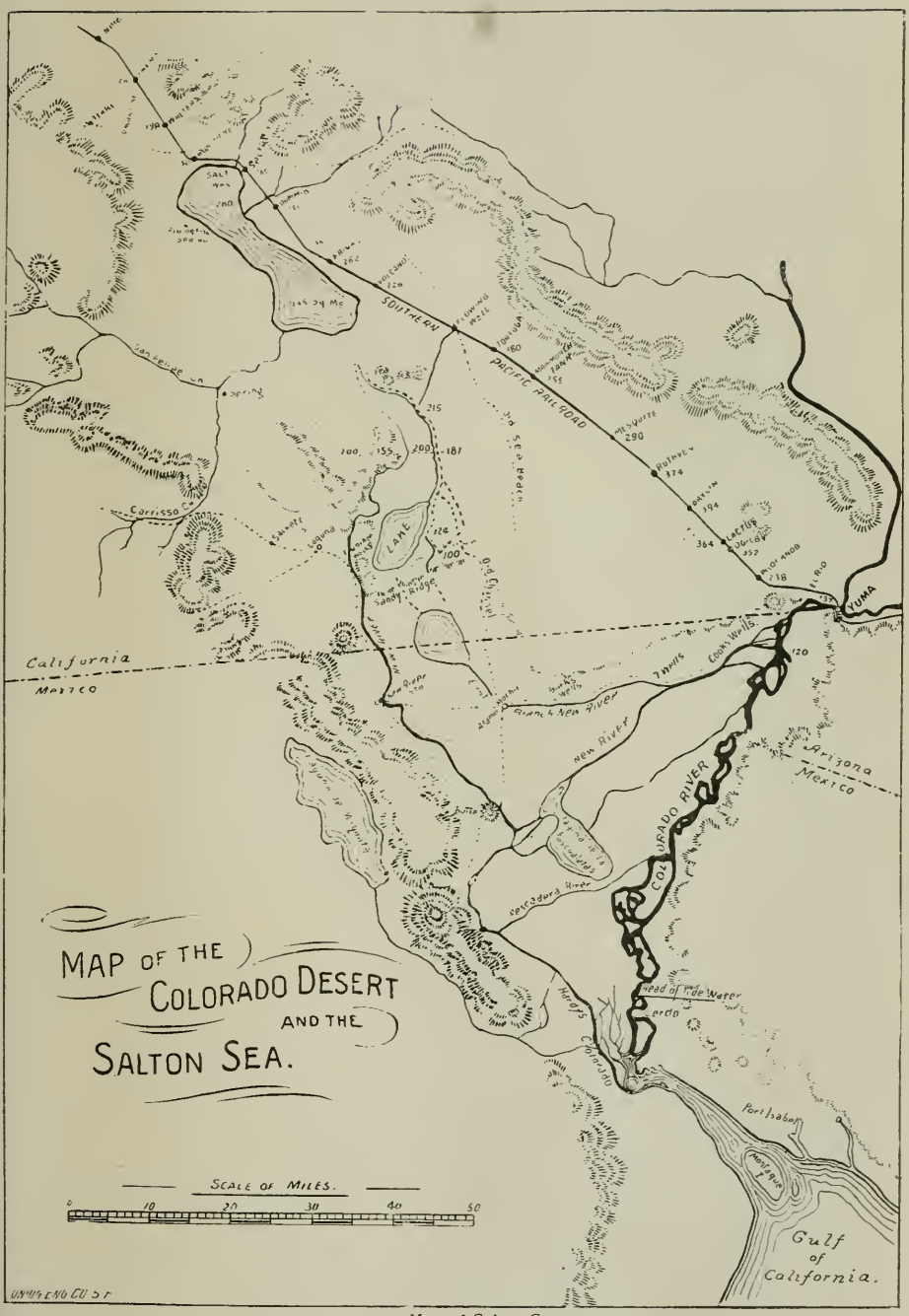
To the geologist this valley possesses an extreme interest, as the old water-line of discolored granite produced by calcareous incrustations, can be distinctly seen and followed for miles on the higher portions of the land above water. Many bits of pottery are found in high places, telling of ancient occupation. But perhaps the most remarkable and striking evidence of ancient occupation in connection with the sea are what the Indians call fish-traps, which they claim their forefathers em-

Palm Canyon, Leading up from Salton Sea.

ployed when the sea was there. The "traps" are circular in shape, formed on the face of the range, being simple depressions surrounded by a wall of granite. They are from two and a half to nine feet in diameter, and give the impression that they were built out at low tide, so that as the water came in fish would enter and become caught. Possibly they may have been pens for holding fish caught by the fishermen. In any event, they were for some such purpose, and are among the most interesting features of this ancient seashore.

The few Cahuillas have many traditions relating to the sea, one being that their ancestors lived upon the fish taken here, and that the water subsided slowly, then came back suddenly, drowning large numbers of them. Another tradition of especial interest, is that white birds came sailing over the sea at this time, bearing little men, who, after obtaining permission from their ancestors, sailed away. The white birds were, in all probability, white-sailed ships, but who the people were is a question somewhat difficult to answer. The bed of this ancient lake, up to the present time, has attracted the attention of only the curiosity lover who is interested in the fact that here is a depression nearly three hundred feet deep, and that of the invalids who find conditions here favorable to their requirements.

The earliest authentic information regarding this depression is found in the Government survey of the section made in 1856. The account describes the sink as a dry salt lake with a length of twenty-seven miles and a width of from one to nine, in all embracing an area of 156 square miles, while the sink receives the drainage of at least nine thousand miles of a dry and barren country. The old survey shows that floods have occurred in former years, as marked upon it are two channels running from the south, one run known as the New River, shown in the accompanying map, while the other is an irregular broken arroyo, that has at one time been the bed of a mighty torrent. Near this are found the remains of old Indian villages, and from the quantity of pottery, polishing stones and other objects of rude Indian art, it is evident that at a time not extremely remote the river bed contained a permanent stream, upon the banks of which the Indians lived. What closed the river might appear a mystery, but at Alamos Muchos, a few miles south of the Mexican line, the old channel is seen to have been closed by sand ridges that extend east and west across the desert, reaching from Indian Wells to the high lands of the east. In this case, then it was the wind that playing fitfully with the sand of the desert, blew it up into the barriers, that had the effect of depopulating the Indian villages and drying up the river by stopping the supply. According to the investigators sent out by the Southern Pacific road, E. L. Swain and H. Hawgood, the sand ridges formed a dam impounding the overflow of the Colorado, New River, forming a spillway at the western portion of the dam. Until last February the spillway has been sufficient, but the extraordinary flood of that month broke away the sand ridges and the water of the Colorado began to pour into the desert through several channels at a rate of 16,000 cubic feet per second, gradually filling the bed of the old lake and creating widespread wonder and astonishment. The Indians were the first to take the alarm. Remembering the old tradition of the destruction of their forefathers they packed up and left for the mountains, some going high up on the lofty slopes near Banning. To increase their excitement and fear, one of their prophets or medicine men announced that the Messiah was coming, and that he would cause a flood to rush into the valley and destroy the last of the nation. The Indians are very superstitious and it did not require much urging on the part of the medicine men to cause a panic, and at the time of writing many are in camp on the uplands waiting for the flood. The possible advance of the water upon the



Map of Salton Sea.

Southern Pacific Railroad made investigation as to the cause necessary. A boat was carried from the Pacific, over one hundred miles, and several venturesome mariners started out on a voyage of discovery under a sun that gave 140°. They sailed forty miles but could not find the limit, and fearing that they might become stranded they gave it up and returned. A half-breed Indian was then sent out to run around the lake and find out its dimensions, but he returned in a few days almost exhausted, saying that he could not go around it, the extent of surface being too great. The boat was again put out and the depth and saltness of the water taken at various points. The lake was found to have a maximum depth of about three feet, while currents appeared to run in all directions.

The most extravagant rumors were started as to the cause. Some believed that an earthquake was causing water to flow up through some subterranean springs. Others thought that the waters of the Gulf of California were flowing in. Several expeditions were organized—and the adventurous editor of the Banning *Herald*, H. W. Patton, succeeded in sailing from Yuma to Salton, covering the entire length of what is now called the Salton sea—the trip being made under somewhat remarkable circumstances, and requiring no little hardihood, as the voyagers did not know where they were going, the channel presumably abounding in whirlpools and sand bars. Mr. Patton made the attempt as chief of an expedition organized by the San Francisco *Examiner* and sailed from Yuma in a temperature of 112° in the shade, enough in itself to have deterred most men. They left the Colorado, fourteen miles below Yuma, the boat turning into a wild slough. For ten miles they drifted then finding a village of Sigeno Indians. For fourteen miles they followed the slough which took them into a laguna or lake formed by the overflow of the Colorado, and there they saw one of the sources of the trouble. At or near Sigeno the water was leaving the laguna and flowing in innumerable streams due west, making its way to the desert. Near here a bar was forming in the Colorado, which was suggestive of an ultimate important change in the river bed. The desert here resembled the delta of a river, islands and bars of sand appearing on every hand, while the water, with a depth of twelve feet, rushed on, creating a continual change in the surroundings. Groves of mesquite trees were passed deeply submerged, only their tops showing, and not far from here the old Yuma and San Diego stageroad was passed with a depth of fifteen feet of water over it. The river took them to the south of Cooks' Wells and Gardners, and gradually spread out into a vast lake. They passed the old stage station, Alamos Muchos, having sailed over one hundred and fifty miles in making the fifty-two, as the crow flies, from Yuma, the stream here being half a mile wide and at least twenty feet deep. From the old stage station they sailed north, meeting ten miles away another large stream. The stream varied, now being narrow or spreading out into a lake so wide that its borders could not be seen. Remnants of human occupation were often passed, old camps, broken wagons, deserted on the desert, possibly by men who were dying for a drink of the flood that was now rolling by and licking up the dry sands that had been baking for years. For ten miles or more the stream turned east and apparently carried them toward Yuma again; then it suddenly broke through a sandbank and spread out over the desert, flowing in a northerly direction, and covering the desert as far as the eye could see. Drifting along they came to a place where several streams joined forces, forming a series of falls; then came more lakes and streams. At some points the banks were 300 or 400 feet high, showing that the water had cut through in former years. Great masses of sand and earth were continually falling from the banks, crashing into the water, that was here rough and

The Salton Sea.

abounding in dangerous whirlpools, one of which completely capsized the frail craft, rolling it over and over, destroying much of their provisions. A lake at least twenty miles square was found, from the surface of which protruded the tops of mesquite trees. For twenty miles the expedition followed this river, meeting upon its banks Mr. E. L. Swaine's expedition, sent out by direction of C. P. Huntington, president of the Southern Pacific road, who was making investigations for the benefit of the Bureau of Irrigation Inquiry of the Agricultural Department at Washington. A few miles further on the roar of a waterfall struck the ears of the explorers, and coming to it they found a sheer fall of eighteen feet. This stopped their progress, and the flat-bottomed boat was landed upon the bank. There a singular occurrence took place, illustrating the rapidity with which the earth or sand washed away. The party camped here all night, and in the morning found that the falls had traveled half a mile up the stream, leaving their boat in comparatively smooth water, but with velocity that carried them forty miles or more, at a rate altogether too rapid for pleasure. This was the last experience, as the stream led into Salton lake, where losing the current, they drifted aimlessly, and finally became stranded in the mud, a predicament which the plucky chief, Mr. Patton, had anticipated and dreaded. Out of the boat they jumped, sinking waist-deep in quicksand, and began pushing their frail craft along under the terrific heat of the sun 120° to 130°, which sent clouds of vapor upward, telling of the enormous evaporation. The adventurers landed in many places en route, and with a Kodak, took pictures of deserted Indian villages, the falls of New River and various points of interest, and finally reached the Salt Works in safety, after having made one of the pluckiest voyages ever attempted in America.

The trip of Mr. Patton, made in the interest of the *Examiner*, was one of discovery and adventure. This was followed up by the party previously referred to, organized by the Southern Pacific Company. The latter made many interesting observations that will be especially valuable from a scientific standpoint. They settled the question of danger to the Southern Pacific road, showing conclusively that the water would have to rise at least ten feet above its highest point before it encroached at all upon the line of the road. The formation of the desert sea was so startling that many sensational stories went abroad, and west-bound tourists were led to believe that there was danger. On the contrary, the road is perfectly safe, is ten feet above and not near the sea, which in point of fact adds materially to the interest in the desert, and will undoubtedly attract much attention during the coming winter from the tourists.

The Southern Pacific expedition started July 11 from Fleming Wells in a mule team to investigate the borders of the sea. After a number of attempts they succeded in getting a rope across the river and transported their instruments over on a boat made of two air-tight kegs and the endgate of a wagon, and fully examined the adjacent country, which resulted in a number of interesting and valuable tables. They found that the highest water in the Colorado was thirty-three feet in February, 1891. The flow at Yuma, with a twenty-foot gauge in July, 1891, was 35,000 cubic feet per second. The water first appeared at Salton June 22. Other interesting points are found in the following tables:

TABLE OF ELEVATIONS.

Lowest elevation of Southern Pacific track, underside of ties, 267.9 feet below sea level.

Length of track 267.9 feet to 250 feet below sea level, 28.4 miles.

Length of track 250 feet to 200 feet below sea level, 9 miles.

Length of track 200 feet to 150 feet below sea level, 6.9 miles.

Length of track 150 feet to 100 feet below sea level, 6.3 miles.

Length of track 100 feet to 50 feet below sea level, 5.3 miles.

Length of track 50 feet below sea level, 4.4 miles.

Total mileage below sea level 60.3 miles.

Lowest toes of railway bank slopes at a few narrow points west of Salton, 271 feet.

Salton Sea—Showing Salt Works.

Lowest toes of slopes in general across low ground east and west of Salton, 270 feet.

Bottom of lake at lowest point about 3 miles south of end of salt spur, 280.8 feet.

EVAPORATION AND HUMIDITY OBSERVATIONS NEAR SALTON.

Evaporations measured by means of a floating can. Humidity determined by dry and wet bulb methods.

Date.	Hour.	Wind.	Inches evap'rtd in 24 hrs.	Humidity per cent.
July 6	7.00 A. M.	S. light	0.57	
July 7	7:00 A. M.	S. light	0.57	
July 8	8:00 A. M.	S. light	0.57	
July 9	8:00 A. M.	S. light	0.25	
July 22	7:30 A. M.	....	....	52.4
July 22	9:45 P. M.	....	....	31.9
July 22	1:00 P. M.	.	0.37	
July 23	1:00 P. M.	.	0.25	....
July 24	1:00 P. M.		0.25	.
July 25	1:00 P. M.	.	0.25	..
July 27	1:00 A. M.	S. E. light	0.20	..
July 29	1:00 P. M.	S. light	0.38	..
Aug. 7	1:00 P. M.	S. light	....	25.4
Aug. 10	1:05 P. M.	S. brisk	....	34.9
Aug. 13	1:45 P. M.	S. light	0.38	.
Aug. 14	1:45 P. M.	S.W. strong	0.38	.

The notes of the photographer, which I sent out at the request of THE CALIFORNIAN, are of interest. He writes:

I took the overland train from Banning to Yuma, arriving there at four o'clock in the morning, and by the time I had my plates changed for making photographs of the river at this place it was daylight. After breakfast I started to look around the place and form some idea about how much water there was in the river, and as near as I could judge it was some three hundred feet wide and from ten to twenty-five feet deep, and running very swiftly. Certainly an abundance of water to fill the whole of California up in time, and I learned from residents of Yuma that the Colorado River had been lower this year than for a number of years back.

The gentlemen of Yuma have a novel way of keeping cool, wearing shirts similar to the ladies' Mother Hubbard, and wearing them loose, excepting when the train comes in. The shirt is made of cloth something like mosquito bar, and certainly looks quite cool.

After making some views of the river from the Yuma bridge I left Yuma for Salton Station.

Salton Station has two houses and a depot and five inhabitants. The Chinese cook is one of the most prominent men in the camp, as he is an exceptionally fine cook, and as eating is the only pleasure at Salton, he is a great favorite with everyone who goes there. Mr. Durbrow, the General Manager, Superintendent and one of the principal stockholders of the New Liverpool Salt Company, is one of the finest gentlemen I ever met on the desert. He came to Salton some years ago a consumptive, whom the physicians had given up to die. They told him he might get well if he would go down on the desert. Well, to-day you see in him a man who can stand more heat and work than any man in his employ; a perfect picture of health, and to look at him you would never imagine he had ever been sick a day in his life.

Mr. Converse is the captain of the *Examiner* exploring expedition, and has lived on the desert for a long time, trapping and prospecting on the Colorado River. The first impression obtained when you arrive in Salton is that you are in San Diego or Catalina Island: nothing but water as far as you can see.

Salton sea proper is from twenty to twenty-five miles wide and about forty-five miles long, covering many thousand acres of ground that was never meant for anything else than a great inland sea, or an extension of the Gulf of California.

Going down to the beach, about five hundred feet from the depot, I found the sea strewn with newly sawed lumber, coming from hundreds of miles up the Colorado River, at the sawmills. The Southern Pacific Railroad switch was covered with water from two and a half to four feet deep, and about two miles out in the lake you can see the smokestack of one of the salt company's engines.

Dr. Murray of Palm Valley told me that an old Indian on his ranch stated that his father said the whole valley used to be damp and have a fine freshwater lake down in the basin around Salton, but the sea came in and drowned all the cattle, and after the sea dried up it left a great deposit of salt and killed

all the grass, and has never been of any use since.

Standing at Salton and looking all around you, and seeing the former outline of the old sea line, and knowing you are two hundred and seventy feet below the sea, certainly makes one a little nervous; I was probably made more so from the fact that all the Indians had left the salt works as soon as they saw the water coming in; so also did Mr. Durbrow's mules, which had never before left camp, but now it is impossible to keep them there without tying them. Mr. Durbrow was very anxious to keep the Indians at the salt works, but how to do so he did not know. Finally he thought of a little strategy that worked well. He sent for the chief, and asked him to go and get him a lot of squaws, as squaws were not afraid. He said he did not want men; they were no good; they were cowards, so he preferred squaws. Squaws "heap brave." Well, it worked. An Indian's only pride is his bravery, and to be compared to a squaw had the desired effect. They came back, firmly believing they would be drowned, but determined to show the white men they were not afraid. And to see these men at work piling salt, the thermometer standing one hundred and twenty in the shade, and every Indian perspiring so much you would imagine there was a garden hose playing on them all the time was interesting.

But one remarkable thing was to see those Indians, every one working with his face toward the gulf, expecting every moment to see the water come in a great body and fill up the entire basin, and wanting to get the first notice, so as to be in time to get away; if it was positively necessary to have their back in that direction, and to see them turn every moment and look in that direction, with a scared look on their faces was as good as a play. Mr. Durbrow stays by them all the time, knowing if he left for a moment they would become panic-stricken, and would leave for the mountains again.

MAKING RAIN.

By John T. Ellis.

THE entire country has been watching with interest during the past few weeks the operations of the little party of scientific men who have been carrying on a most novel series of experiments on the Llano Estacado of Western Texas, in the audacious attempt to compel Dame Nature to send rains upon that thirsty land at their will and bidding. The result of these investigations promises such great benefits to the agricultural classes that the farmers and ranchmen throughout the entire West have watched their progress with as much interest as has the scientific world. The prosperity of the agricultural classes means the prosperity of the country at large; and if it is possible to eliminate the greatest evil which annually threatens the farmer of the West—a long drought when the crops most need rain—then certainly it is to the interest of the people at large to make every effort possible to bring about that result.

Ever since the close of the civil war one man has steadily and persistently advanced the theory that it is possible to effect atmospheric conditions by artificial means, and that rainfall can be produced or increased by the concussions of heavy cannonading. This man is an enthusiast upon the subject, and he has spent a score of years and much money in disseminating his views and calling the attention of public men to their importance. No amount of ridicule could discourage him—his object was to benefit mankind, and with this worthy project in view he steadily persevered. This man is Edward Powers of Delavan, Wis., a civil engineer of wide experience and observation. In 1871 he published a book entitled "War and the Weather," in which, by a collection of very interesting statistics, he showed that in almost every instance great battles in which there has been heavy cannonading have been followed by copious rains. A notable instance to which he called attention was the battle of Buena Vista, which was fought on the 22d and 23d of February, 1847. This was in the midst of the dry season in Mexico and there had been no rain for several months before the battle. The occurrences upon the second day at Buena Vista, as stated by Bvt. Maj. Gen. H. W. Benham of the United States Engineer Corps, were as follows: From 8 to 9 in the morning of that day the artillery was engaged in heavy cannonading, after which, between 11 and 12 o'clock "a most violent shower of rain fell." Again in the afternoon the artillery reopened fire and again, after an interval of about two hours, "another violent shower fell." "And what was positive proof to me that these rains were the direct result of the artillery firing," writes General Benham, "was that no rain had fallen, as I was informed, for a number of months before this battle—I was told eight months, and none fell for three months after the battle, *as I knew was the case*, as I remained at the same station during that time."

The battles of Palo Alto, Molino del Rey, Cherubusco, Monterey and Chepultepec were also fought in the dry season, and each was followed by heavy rains. So it was with nearly every battle in the Mexican war, and so it was, according to the record which Mr. Powers has been at great pains to verify, with over two hundred battles of the late civil war in this country, including every important engagement. It is a formidable array of historical facts which Mr. Powers has brought together to support his theory, and it was his collection of these and his untiring efforts which primarily drew attention to the matter. It is but right, therefore, that the credit should be given to Mr. Powers for his zealous study of this question in behalf of the

farmer. That his motives were entirely unselfish is clearly shown by the following extract from his book: "The art of regulating the weather to some extent, if such an art should ever be acquired, is not one on which a patent could be obtained, nor would the business be one in which a monoply could ever be exercised by an individual. The experiments, when they are made, as eventually they certainly will be, should be made at the public expense, for, in the event of their success, it is the public which will be benefited."

"If, however, Mr. Powers' theories are correct, and, in view of the experimental tests which have lately been made, there can be little doubt on that score, he should go down in history in the front rank of that noble army of philanthropists who have devoted their lives for the benefit of their fellow men. The principles upon which Mr. Powers based his theories are those generally accepted by scientists as to the formation of clouds and the origin of rainstorms. The most important principle is clearly stated by Professor Silliman in his "Principles of Physics," as follows:

"Rain is generally produced by the rapid union of two or more volumes of humid air differing considerably in temperature, the several portions when mingled, being incapable of absorbing the same amount of moisture that each would retain if they had not united. If the excess is great it falls as rain; if it is of a slight amount it appears as a cloud. The production of rain is the result of the law that the capacity of air for moisture decreases in a higher ratio than the temperature."

Now, it is known that over a large portion of the United States there is constantly flowing from southwest to northeast a vast current of humid air, bearing the moisture which has been evaporated from the Pacific Ocean. This enormous stream of aqueous vapor is called the equatorial current. There is also another aerial stream called the polar current flowing over this country from the northeast in a direction nearly opposite to the equatorial current, which is invariably of a much cooler temperature than the latter. In the western portion of the United States the equatorial current flows uninterrupted in its course, but about the time it reaches the Mississippi Valley it comes in conflict with the cooler air of the polar current, and storms are generated by their mingling as described by Professor Silliman.

Applying this principle to the effect of cannon-firing Mr. Powers contended that the concussions produced by the cannonading deflected one of these currents from its course, and, from the mingling of the currents which followed, the storms which so invariably succeeded a battle resulted. Moreover, Mr. Powers held that this result could be effected at any chosen time by a series of heavy volleys of artillery-firing.

It was Mr. Powers' plan for Congress to vote an appropriation sufficient for defraying the expense of taking 200 siege guns from the United States Armory at Rock Island, Ill., to some dry region of the West and there firing one hundred rounds of blank cartridges from them. The estimated expense of such an experiment was so great ($80,000), however, that Congress took no action in the matter.

In 1876, General Daniel Ruggles of Fredricksburg, Va., advanced the proposition that instead of firing cannon on the ground, explosives be carried to a considerable height by means of balloons, and there exploded in the midst of the upper air currents which it was desired to affect. By this means a great conservation of force would be effected and the effect a great battle would have upon the upper currents could be reproduced at a comparatively small expense. General Ruggles succeeded in securing patent rights upon his plan of elevating the explosives, but it subsequently transpired that the scheme had already been fully described in a Chicago

paper, which copied an article on the subject from the Mimora (New Zealand) *Star*, and so General Ruggles' letters patent became worthless.

However, the economy of expense effected by General Ruggles' suggestion made it possible to bring the matter before the consideration of Congress and this was done several years ago by Hon. C. B. Farwell of Chicago, who had long been interested in the subject.

In 1890, Mr. Farwell obtained an appropriation of $2,000 for use by the Department of Agriculture in investigating the subject, and the last Congress added $7,000 to this amount for a series of practical experiments in the West.

General R. G. Dyrenforth, a well-known Washingtonian of broad scientific attainments, was appointed by Secretary Rusk to prosecute these investigations, and during the last five months he, in company with Dr. Claude A. O. Rosell of the Patent Office and other Eastern scientists, having been making a careful study of the subject and planning apparatus and methods of operation. Among the improvements and innovations suggested by these gentlemen was the use of explosive gases in balloons, instead of the raising of heavy explosives with lifting balloons, thus economizing on the first expense of apparatus and greatly reducing the cost of explosives. The gas proposed is a mixture of oxygen and hydrogen in the proportion of one to two, which constitutes one of the most violent explosives known to science.

On August 5, 1891, General Dyrenforth arrived at Midland, Texas, a small desert station on the Llano Estacado, having a carload of apparatus and materials for the manufacture of explosives, and accompanied by a party of distinguished scientists, among whom were Mr. Edward Powers and Dr. C. A. O. Rosell. The apparatus was set up on the "C" ranch, twenty-five miles north of Midland, where the expedition was entertained as guests of the owner, Mr. Nelson Morris of Chicago.

In reaching the ranch the party was driven over miles of brown, parched prairie land, where an allowance of twenty acres to one head of cattle offered but a scant subsistence. Scrubby mesquite brush and a cactus here and there is the only vegetation that breaks the monotony of the scattered clumps of mesquite grass on these plains, while the sole water supply is obtained by windmill pumps and bored wells. No rain had fallen in this locality for three months, and little for three years

It was with a full knowledge of these conditions, and because they wished to experiment in a region where they could not be deceived by coincidences, that General Dyrenforth and his party came to this locality.

The three principal operations were made upon August 9th, 18th and 25th, respectively, while an almost continual "skirmish" of light explosions was maintained during the intervals between these dates, in order to keep the weather in an unsettled condition. During the seventeen days of the experiments three heavy rains, of several hours duration, fell upon the "C" ranch—one following by a few hours each of the three principal operations, and light showers fell almost daily during the continuance of the light firing.

The method of operation was as follows: Balloons of ten and twelve-foot diameter, capable of containing six hundred and one thousand cubic feet of gas each, respectively, were first filled one-third full of oxygen gas by connecting them with retorts containing chlorate of potash and a small quantity of binoxide of manganese. When these retorts are subjected to intense heat in gasoline furnaces constructed for the purpose, the potash is melted and passes off in the form of oxygen gas. The gas is made to pass through water charged with lime and caustic soda to cleanse it from clearine and other dangerous impurities, and then passes into the balloon. When a balloon has received a sufficient amount of oxygen it is detached from the retorts and connected by pipes

with the hydrogen generators, which consist of large tanks containing water and several hundred pounds of cast iron borings on the bottom. Into these tanks sulphuric acid is decanted from glass carboys, or lead-lined drums, and by its action the water is decomposed into its elementary gases—hydrogen and oxygen. The iron takes up the latter, allowing the hydrogen to escape through a wash-barrel of lime water into the balloon. When the inflation of the balloon is completed an electric cap is inserted in the neck, insulated wires are attached and the balloon is allowed to rise to a height of one to three thousand feet. When it has reached the desired altitude the wires are connected with the binding posts of a dynamo discharger, the handle of the machine is pressed down, an electric current speeds along the wire and explodes the cap. Suddenly the balloon is transformed into a ball of flaming fire, which instantly expands to mammoth proportions, and then as suddenly vanishes, leaving a thousand small fragments of the balloon envelope floating away on the breeze. They did not have time to ignite, the flash was so sudden, and if we followed them till they fluttered to the ground should find that the white cloth had not even been blackened in the least. Hardly has the observer recovered his breath from the grandness of the spectacle when the tremendous explosion comes rushing over him, a mighty tidal wave of sound, which shakes the earth with its concussion, and rolls thundering off over the distant swells of the prairie.

While the balloons are being filled and exploded large quantities of dynamite and rackarock powder are being fired in heavy charges at various points on the plains, and at each explosion, though it may be a mile away, the force of the concussion flattens in the sides of the balloons and they flap out again with a sharp snap against the netting.

The commotion is kept up for several hours, *and as yet rain has not once failed to follow.*

On the day of the last experiment at the "C" ranch, the 25th of August, at half-past three in the afternoon, the barograph or registering barometer was describing the usual curve, indicating "dry" weather for the next twenty-four hours, while the wet and dry bulb hygrometer, a very accurate instrument—brought from the Weather Bureau Instrument Room at Washington—showed a relative humidity of only 16 out of a possible 100—a most unusual and unfavorable condition. The humidity at that locality generally ranges from 45 to 65, while in San Francisco a humidity of 80 to 90 is not a very unusual occurrence. The day was clear and the Weather Bureau foretold fair weather for that region. Every indication and condition was as unfavorable as could be found.

At noon of the 25th the firing was begun. Balloons were sent up at intervals of about one hour during the afternoon, while heavy charges of dynamite and rackarock were fired at shorter intervals upon the ground. Altogether about 600 pounds of ground explosives and 3000 cubic feet of oxyhydrogen gas was used.

The firing ceased at 11 P. M. and at 3 A. M. the experimenters were awakened by the flash of lightning and crash of thunder. The rain fell in torrents from 4:30 to 8 o'clock A. M., and the night operator at Midland station said he never had seen so much lightning before. Altogether this last experiment was a grand success and demonstrated almost beyond a question the practicability of the artificial production of rainfall in the most arid regions.

The expedition has now removed its apparatus to El Paso, Texas,* where, at the time of this writing, preparations are being made to proceed with the experiments before a large gathering of prominent citizens of Texas, Arizona and New Mexico and a distinguished commission of Mexican officials and scientists from Chihuahua and the Mexican capital. As General

* These experiments have been followed by rain in almost every instance.—ED.

Dyrenforth's party drove from the "C" ranch to the station at Midland the appearance of the country formed a pleasing contrast to their first view of the staked plains. Instead of stirring up clouds of choking dust the carriages spun lightly over a moist and hard-packed road, while in place of the brown and barren desert, which had given them comfortless welcome on their arrival, a green meadow stretched out in every direction as far as the eye could reach, promising comfort to the ranchman's herds and forming a scene of solitary beauty.

THOSE who are in a position to judge, who can grasp the situation as presented by the Pacific slope as a whole, cannot fail to be impressed by the fact, that, while this region has been prominently before the nations of the world for years as an important commercial and industrial center, it has, in point of fact, just begun its actual development, and during the next decade is going to make the real advancement which shall make it an empire in all the name implies. From one end of the Pacific Coast to the other, growth, development of resources and increase in values is apparent, and when it is considered that Oregon, Washington and extreme Southern California have but recently passed through a remarkable period of inflation, the growth is more remarkable. The traveler from the East or Europe has read of the "boom" and its dire results, but on visiting the west coast cities nothing but prosperity is noticeable, the truth being, that while property was rated high, the climate and agricultural possibilities in the various regions are extremely favorable for the maintenance of a large population, and new settlers are pouring in from every land under the sun. The value of land may have been exaggerated, but the possibilities of the Pacific slope have not been, and this is the magnet that will, in a few years, build up a competitor to the East in every branch of industry, art, science or trade.

The article in the present issue by H. N. Rust, U. S. Indian Agent, is of peculiar interest, describing as it does one of the most interesting and remarkable events of the century — the return of water into what is evidently the bed of an ancient sea of no little magnitude. The overflow has made a large lake in the Colorado desert, but whether it will remain is a question that can hardly be decided at present. The point of especial interest is whether the enormous evaporation will result in a change of climate in Southern California, giving San Diego and San Bernardino counties a damper climate in summer and possibly a colder one in winter. Authorities differ on this point, but either the sea has affected the country in the vicinity of San Gorgonio, or we may chronicle a remarkable and singular coincidence The present season at Beaumont and in the adjacent mountains has been marked by phenomena never observed before by the oldest inhabitant. It is true that Southern California has light showers every summer and masses of clouds are seen along the mountains, but cloudbursts and terrific rains have been unknown up to the present time. During twenty-four days, ending August 15, there were not less than five cloudbursts, while rain fell every day at Seven Palms, that prior to the appearance of the lake has been exempt from rain storms at this season. The temperature has been remarkably low, and severe storms have been the rule. To those who are familiar with the country there is something more than coincidence in this. Whether the Salton sea will become permanent can only be settled by time, but if there is any possibility of its interfering with the pride of the south, its climate, we may expect to see an army of Southern Californians marching on the Colorado break, to turn the water back into the original channel.

Concerning the report that the land on the desert was sinking, thus allowing the water to pour in from the gulf, the explanation given by Mr. Rust in a personal letter to the editor is interesting. He says: "My own belief for years is that the entrance from the gulf into this desert basin was closed by natural causes, principaliy the debris of the Colorado at high water forming a bar across the inlet from the gulf, shutting out tide water. At low water the winds may have raised this bar still higher, thus forming a dam sufficient to keep the gulf water

sea will find the level of the mouth of the Colorado. Should this bring the level of the new sea to that, or near that of the old sea, as it will be likely to, when the great overflow of the Gila and Colorado occur, a small excavation of the bar which now excludes tide water would permit the tide to come in and the overflow of the Colorado and Gila would run into Salton lake, and so on to the ocean. This, I believe to be a desirable end. General J. C. Fremont and others have urged that this be accomplished by the help of Government. Wise men without knowledge have told us it was impossible—that evaporation would cause all the water of the Colorado, if turned onto the desert to disappear. Nature and the Colorado have proven the fallacy of such statements. I believe it very desirable that these waters should cover the desert. That no party except the salt works and the Southern Pacific Railroad would be damaged by it, and an immense area of land and mountain waste would be benefited by it; its climatic influences may be supposed to be beneficial and very wide in extent, far outreaching the damage done to the railroad and salt works. The railroad would only be obliged to remove some miles of track over an inexpensive, nearly level country, and the discomfort of desert travel would be a thing of the past. Local business would soon make up to the road the loss of the $40,000 annually received by them for transporting the salt, and new salt mines are abundant between this line of road and the Santa Fe line in the Mojave district, north. The foolish statements made by rival roads East, of the danger to travelers coming to California by the Southern Pacific Railroad on account of this great natural phenomena have no foundation in fact. On the contrary, every lover of nature will be invited to present the indulgent reading public, each month, with an array of articles, all of which have been studiously rejected by editors of other magazines, the idea being to show the amount of good things which are lost to the reading public each year, and, perhaps, pluck some shining literary light from possible oblivion. This is an ingenious scheme. The magazine could possibly exist on a subscription list of the 100,000 or more disappointed contributors, but why not act on a suggestion which the writer heard discussed? It was proposed to establish a publication reversing the order of things. Instead of paying for articles, the editor would charge for them. Thus the editor would write: "The *Polyglot* accepts your article for publication. The charge for insertion will be $10 per page. Fifty copies of the number containing your article will be sent you on publication." The advantages of this are evident. The thousand and one contributors who cannot write, but merely desire to see their names in print, will be gratified. Circulation need not be pushed by the publisher, as the copies would be given away. Each writer would naturally, to satisfy his pride, give away a large number; hence, a circulation would be obtained, nolens volens, and, as a result, the magazine would have a certain value to the advertisers. This idea is commended to the originator of the rejected manuscript plan.

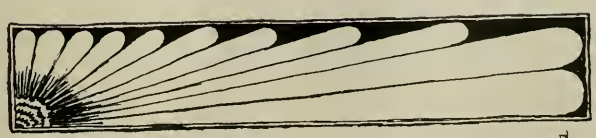
It was generally supposed that slavery was abolished in America years ago, but the fact remains that wherever the Chinese have obtained a footing, women and children are bought and sold, and treated in a manner that would put to shame the worst details of ante-bellum negro slavery. In San Francisco a little band of God-fearing women are fighting this evil single-handed and alone.

able is the object.

The number of individuals in the United States who are continually starting new publications, and who think they can succeed where others fail, is somewhat remarkable. A correspondent in Tombstone, Arizona, asks the advice of THE CALIFORNIAN as to the chance for a new weekly in San Francisco, where *The Wave*, *The Argonaut* and several others well fill the field. The incident illustrates the fact that, in many instances, people in looking for openings in business fail to observe opportunities in their immediate vicinities, which, if taken at the flood may lead on to success and many subscribers. To the Arizonian we would say that the very best of openings awaits his acceptance in his own town. It is a well-known fact that an Eastern publication has, for several years, amused itself and its readers by reciting, weekly, warlike occurrences in Arizona, which are supposedly taken from an Arizona paper, the *Arizona Kicker*. The *Kicker* is, of course, a figure of the imagination, but so industriously has it been worked, from every point of the compass, as Mr. Pecksniff observed and penciled the famous Salisbury Cathedral, that not a few people actually believe that the *Kicker* is a reality. The situation at present is that the good people of Arizona are up in arms at this joke long drawn out, and it is reported that several tourists have been shot for innocently inquiring for a copy of the *Kicker* while

[illegible] the old missions of California are [illegible] the most attractive features of this country to the average tourist. They are [illegible] only American ruins, and will, like wine, increase in value as time rolls on. The owner of these relics does not appear to appreciate their value, and many are slowly going to decay. Until within a few weeks the chapel of the magnificent old pile, San Juan Capistrano, was a disgrace, the church utterly neglecting it. Private parties have now repaired it. San Luis Rey is fast disappearing and in a few years will be destroyed. Is there not sentiment enough in California to create a society for the preservation of the missions? They should not be allowed to fall to decay, and some means should be devised to put a stop to the vandalism which forms a part of their every-day history.

Proposing gravely to prepare an article for THE CALIFORNIAN on the Pacific Coast defenses provided by the National Government, the writer found it a difficult task, as there was from San Francisco to San Diego, absolutely nothing to write about. The entire water front with its valuable cities, orchards and ranches, is *sans* guns, *sans* troops, *sans* batteries, *sans* everything that should be, and in the meantime the patient dwellers on the Pacific Slope, without Cabinet representation at Washington, are wondering when their investments on this coast are to receive adequate protection in case of war.



croft History Company; the works of J. Stuart & Co. and others, all suggest that the time is coming when the Pacific slope will, if not rival the great Eastern centers of the publishing interest, be able to fairly compete with them in the production of books of a high rank, not alone in the literary excellence, but in the art of production. Among the recent publications of The S. Carson Company of San Francisco is a little work entitled "Forensic Eloquence," a treatise on the theory and practice of oratory that deserves more than passing mention. The author, John Goss, A.M., has produced a work that is a valuable addition to the literature of the subject, and one which should be a useful adjunct, not only to school work in this direction, but to public men and others, who are desirous of improving their style in public speaking. The author presents the student and reader with many oratorical gems, and says: "My purpose in the present work has been to examine each speech by itself, and from it alone to obtain safe directions for the beginner. Following this plan, it will be found that every good speech has a proper opening, a clear statement of propositions to be discussed, and closes with a well-worded peroration. It will be found, also, that these three elements go hand in hand together; if any one of them be wanting, the effort will not be up to the standard of a great speech. I have drawn on the greatest orations of ancient and modern times to sustain this view, and if the selections do not bear me out in this method, the reader is at liberty to discard the description and adhere to the model." In the ten chapters the subject is traced from the earliest times until the days of Clay and Calhoun, and a forcible presentation of the subject made. The work can be commended without reservation.

Millionaires of a Day.—There are few books of the day which anyone dare say will outlive the year of their birth; but will be read as long as any of the "boomers" of 1886-88 survive, and by their children after them. And in every time of unusually rapid growth on this coast it will be read by many, and should be read by all, who incline to dabble in real estate for speculation. It should be read by all who intend to invest in real estate anywhere. "Millionaires of a Day" stands alone among books in California and cannot be classified. It is not only the first thorough description ever written of that peculiar phenomenon of human nature known as a real estate boom, but it has for its subject what was beyond doubt the greatest and craziest boom that ever swept over so great an area and ruined or crippled so many people who prided themselves on their shrewdness, and who had, in fact, been successful in other ways. Although it describes those times so faithfully that every ex-boomer thinks he is especially meant by some one of the different characters introduced, and though it is so filled with warning and good advice to future investors as to make it of philosophical as well as historical value, it is yet so filled with local coloring; California so breathes from every page; its advantages, attractions and peculiarities are so interwoven as a background to the play, that, as a description of the country, it is scarcely inferior to the author's well-known "Southern California," which has been so much admired in this country and Europe. The style is rapid, yet piquant and smooth; the action moves before one like that of a attractive panoroma, and the reader is unconscious of any effort. The interview in the first chapter with the old-time, lazy, shiftless settler is a classic in its line, with the advantage of literal truth. The book should find a place in every library. Fords, Howell & Hurlbert, New York, publishers.

Voice Culture and Elocution. By William T. Ross, A. M.—Even those who are not of the profession, and, there-

fore, do not surely believe that elocution is the chief end of man, may profit largely by a study of this manual. It is not an infallible evidence of the value of a book that it has passed through several editions, but in the case of a text-book the fact may be regarded as fairly conclusive, and especially so in this instance, when the work has gone the round of many institutions, and received the commendation of elocutionists themselves who, as a class, are not remarkable for their enthusiasm over the achievements of their fellows, however well pleased they may be over their own and unhesitating in declaiming the fact. The work before us is now in its fifth edition. It is in large use in schools and colleges, and is likely to be still more widely spread as the attention to voice-training gains ground. We know of no better manual to put into the hands of teachers and students than this. We may add that no institution of learning can consider itself entirely, completely equipped that does not provide instruction in elocution. Mr. Ross has long been known as an earnest and assiduous follower of the natural system of cultivating the vocal organs. Let him define the idea in his own language: "Elocution," says he, "does not consist in mere imitation of the voice and manner of the teacher. . . . Its province is to teach the pupil the art of using the rules and exercises of elocution, not as the end and aim of the study, but as the means for the better expression of thought and emotion. By such a course of instruction the individuality of the student is best preserved." Wise words, these, and to be carefully considered by all professional elocutionists. Never, it seems, was there greater need of the study of certain branches of what our author calls "The Art of Vocal and Physical Expression" than the present day. This must be the case, as society becomes more complex and exacting, thought and expression to convey thought more varied, and when, as is invariably the habit with all advance, there is a return movement in this instance of loose speaking and indifferent articulation. Take reading aloud, for inample. We might take issue with Mr. Ross when he writes under the division—Style: "More practice is needed in the colloquial style of reading and speaking than in any other." But we entirely agree with him when he adds: "There is far too much declaiming in the declamatory, too much dramatic in the drama, and not enough talking anywhere." It seems to us that the tendency of "the colloquial," especially in reading, is to get the better of the simple, the spontaneous, the natural. Readers, professional or otherwise, are prone to emphasize, to elucidate, to make plain by stress, manner or intonation, or in whatever way they think to impress. They lean too little to the listener, or to the imagination, or to the text, which, if it is worth reading at all, speaks, though it may not articulate, for itself. Under the heading "Emphasis" we read: "Emphasis is relative, not absolute. There is no such thing as *emphasis*, and *not* emphasis in reading and speaking. *All* thought that is voiced is relatively *emphatic*. The *difference* is only in *degree*." We may here remark that Mr. Ross' directions are like these already cited, suggestive, clear, and pointed, while his illustrations are equally satisfactory. It remains to say a word regarding the selections forming nearly one-third of the book under consideration. It has always seemed to us that in a work of this kind, quotations and extracts should be of a high literary character. As a rule, the standard is well maintained in this little volume, although one might wish some contributions removed that were, we are told, written expressly for "Voice Culture." The specimens are of that common and unhappy order whose inspiration is the old tramp or some other form of illiteracy, wherein the colloquial is pursued in these instances to the bitter end. But the compiler doubtless knows his public, and, probably, has gathered much material together chiefly for purposes of recitation and elocutionary drill. One finds many old, but still most serviceable, pieces of both literary and declamatory oratorical value, prose as well as verse. Among the newer insertions, one of the best from every point of view is Madge Morris' "The Golden Gate." The long poem entitled "Lasca," by Duprey, like Joaquin Miller's early efforts, is full of power and a strange pathos. It has the true Western flavor, too, though it is not the Californian. An admirable selection is George McDonald's "The Wind and the Moon," a charming little fantasy, that may be of real benefit in more ways than one to the child who has to learn to recite it.

Books on temperance are not rare, but the story of the "Saloon Social Life and the Insane Asylum," by A. C. Rawson, will constitute a new departure in this direction. The interest in the work lies in its realism. The author was a victim to the habit of alcoholism, and while a man of nerve and fine business habits became a complete wreck and was placed in the asylum at Stockton at his own request. When he recovered his

health and reason, and in these leisure moments began to think upon the relation of intemperance to insanity, as illustrated by his own case and that of others, the subject grew upon him, and seeing an opportunity to do good, he wrote the present volume, which is a telling sermon in favor of temperance, as the actual experience of the author. The book carries a weight which few books have, and becomes at once a valuable medium for temperance workers. Mr. Rawson deals with the alcohol habit in a way that appeals to those who have made a study of the subject from a medical standpoint. He assumes that a drunken man is insane, and that the habit, if continued, must become a taint that can be handed down from generation to generation, becoming the cause of the same habit, or insanity. The story is graphically told, many portions showing fine dramatic feeling and expression. The book is unique in its way, and a valuable addition to the literature of the subject. The volume is handsomely illustrated and bound. It is published by J. Stuart & Co., San Francisco, and sold by subscription only.

Among the Pacific Coast writers, Mr. Leigh H. Irvine, author of the "Iron Highway," "Labor Problems," and others, is attracting attention throughout the country, by the strong and masterful manner in which he is placing the various labor and other problems before the people. It is often a fact that labor reformers and writers who address themselves to the wage-earner fail to make themselves understood by the very people to whom they appeal. Mr. Irvine is an exception to this, as not only his works show, but his public addresses, especially the four nights' debates with Nationalists and Henry George men, in Oakland, in this State. Mr. Irvine's last book, "The Struggle for Bread," has already reached the welfth thousand edition, and is one of thet best and most logical presentations of an important subject we have seen. It is rarely that we find a man who can write logically and gracefully; who can lend a charm to statistics and who is equally at home on the rostrum. The decade is one of advancement all along the line; it is equally prolific in its production of wild-cat schemes, for the expansion of human interests, and consequently the army of theorists and pseudo-cranks is a large one. It is refreshing then to find, among the younger men, one who can represent the rising generation, either in the professions or the field of labor, and point out in so forcible a manner the many fallacies of the day. Mr. Irvine's book should be read, and well read, by those who take Mr. Bellamy very much in earnest and who are disposed to devote all their energies to the land schemes of Henry George. The Struggle for Bread. John B. Alden, New York Publishers.

Numbers of books on the Sandwich Islands have appeared from time to time, but Anne M. Prescott's Hawaii, comes with a more than ordinarily fresh aroma of the islands of the sea. The author has not written from the standpoint of the tourist who has made the regulation trip against time, but spent many years in Hawaii, and in a little volume, attractively bound, gives the impressions of her life in a locality that is of especial interest to this country. A brief history of the island is given in the chapters on the various points of interest which whet the appetite and increase the desire of the reader to visit the spot described. The book is neatly printed and is published by the San Francisco firm of C. A. Murdock & Co.

Taking the Hedge and Ditch.

THE CALIFORNIAN.

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CROSS-COUNTRY RIDING.

BY FRANCIS FENELON ROWLAND, M. D.

TO THE admirer of the beautiful in nature and the lover of a good saddle-horse there is no more ideal spot to enjoy both than in Southern California during that season very inappropriately called winter; for, as a matter of fact, winter may be said to be unknown here except what is seen and experienced on the distant snow-crowned peaks of the Sierra Madre Mountains. The average Californian of the south will always claim that the summer or the rainless season is the choicest time of the entire year for enjoyment of the many benefits to be had on every hand. This article will treat chiefly of that season when strangers are here in greater numbers and ask them to join a party of the Valley Hunt, who are out for a cross-country ride with their fleet pack of greyhounds.

Midwinter is selected for the ride, taking for granted that the winter rains have washed the sky and orange groves of dust, leaving such an atmosphere and landscape that will cause the most unromantic to cry out with wonder and amazement at the scene presented. It is at this time the poet becomes the better historian; for it is not possible for the prosaic pen to give adequate expression to the surpassing grandeur of the landscape.

The secretary of the club has sent each member notice that the dogs will be at a certain place at 9 A. M. The meet will be on the top of Monk Hill, a high elevation rising out of the San Gabriel Valley between the mountains four miles away towards the north and rose-embowered Pasadena toward the south, commanding a view of the valley in all directions. Long before the appointed hour some members and invited guests have arrived and spend the moments drinking in the health-giving air, laden as it is with the fragrance of the orange and lemon which is wafted from the contiguous groves; or, as if nature is not content with what art has done, thousands of acres on every side as far as the eye can reach are covered with the poppy, all aglow, lupines and the sweet scented wild heliotrope over which the hunters will soon be speeding, thrilled with joy caused by the novelty of a midwinter's gallop over such a carpet of flowers.

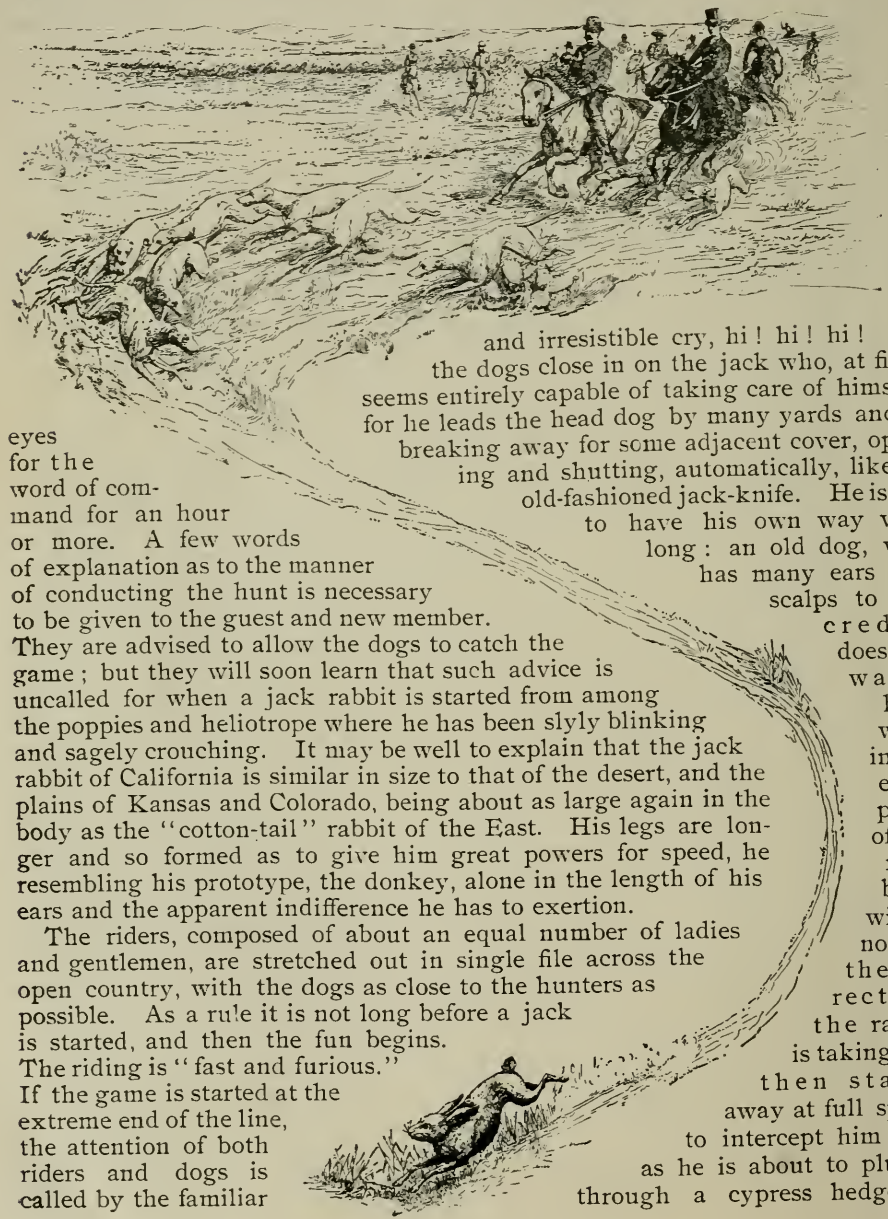
It is a ride like this that will give the invalid a new lease of life and lead him to ask himself the question, "All this and heaven too?"

It is now a few minutes past the hour appointed for the start; but an extension of time is asked, because

some of the more tardy members have taken a longer nap than usual or have stopped to pick a bunch of Marechal Niel or a spray of lemon or orange blossoms to be presented to the visitor who is just being introduced to the marvels of a cross-country ride in Southern California and will wear a corsage bouquet during the chase.

The master of hounds sounds his horn, which in this case is a veritable steer-horn mounted with silver. The dogs are eager to be off, as they have been watching with their large, liquid eyes for the word of command for an hour or more. A few words of explanation as to the manner of conducting the hunt is necessary to be given to the guest and new member. They are advised to allow the dogs to catch the game; but they will soon learn that such advice is uncalled for when a jack rabbit is started from among the poppies and heliotrope where he has been slyly blinking and sagely crouching. It may be well to explain that the jack rabbit of California is similar in size to that of the desert, and the plains of Kansas and Colorado, being about as large again in the body as the "cotton-tail" rabbit of the East. His legs are longer and so formed as to give him great powers for speed, he resembling his prototype, the donkey, alone in the length of his ears and the apparent indifference he has to exertion.

The riders, composed of about an equal number of ladies and gentlemen, are stretched out in single file across the open country, with the dogs as close to the hunters as possible. As a rule it is not long before a jack is started, and then the fun begins. The riding is "fast and furious." If the game is started at the extreme end of the line, the attention of both riders and dogs is called by the familiar



and irresistible cry, hi! hi! hi! All the dogs close in on the jack who, at first, seems entirely capable of taking care of himself, for he leads the head dog by many yards and is breaking away for some adjacent cover, opening and shutting, automatically, like an old-fashioned jack-knife. He is not to have his own way very long: an old dog, who has many ears and scalps to his credit, does not waste his wind in the early part of the run but wisely notices the direction the rabbit is taking; he then starts away at full speed to intercept him just as he is about to plunge through a cypress hedge o

seek safety in a patch of wild mustard; he is captured—a few seconds ends it all. The hunters rapidly gather at the scene of the encounter. The gentleman who first seizes the rabbit cuts off its long ears, and gracefully presents them to the first lady who is "in at the death," if, indeed, as is more than likely to occur, she is not the first herself to claim all the honor; while the rest of the hunters are wondering why, from the earnestness and skill with which they rode, they did not get there in time. They will soon learn after a few more dashes that it is not riding a fabulous distance or the greatest speed or with the most conspicuous daring, but getting in at the death with the least exertion to rider and beast, which will be the most satisfactory at the end of the day's hunt. The pack is called off to a near-by hydrant, where they rest and wash their mouths and cool their throats. It is amusing to see the greyhounds refreshing themselves by taking water directly from the faucet; rarely do they lap the water if an opportunity is afforded for them to drink from a running pipe. To the visitor it is ever a source of wonder to see facilities afforded for so frequent chances to enjoy a drink of the purest mountain water. For miles in all directions the friendly fountain stands ready for use, placed there by the once eager land-boomer, who covered hundreds of acres with water-pipes, so that it might be possible for every building lot, on which was to stand the house that was soon to add its dwellers, to swell the population of a future city. Many times the Valley Hunt has called him a benefactor to horse and dog, if he did not prove to be one to himself.

All have been refreshed and are now ready for another run. The field is similarly arranged as in the first instance. A muscat or zinfandel vineyard is to be driven. The proprietor does not object, because the jack is his sworn enemy. It is not a rarity to pick delicious raisins or even an occasional bunch of the second crop of muscats late in December, which has been overlooked by the pickers for the winery. After the grapes have been gathered the vines are trimmed back close to the trunk, year after year, until the vineyard is studded all over with great knotted and gnarled stumps on which it is needless to say that it is dangerous for horse or rider to fall. Reckless is the horseman who does not "use his head" when a jack is started. The rows in many of the vineyards in the San Gabriel Valley are a mile or more in length; but between them there is ample room for a careful rider and a sensible horse to go at full speed. In the shade of an old stump the coy jack is sitting, and will not leave his hiding place until the dogs get too close for comfort. He then puts his energies at work, by taking prodigious leaps into the air, and makes a break for liberty between two rows of vines. The hunters have been commanded to ride in such a manner as to direct the game into the open country. Seated on a horse of the ordinary height, one can see the maneuvers of the jack as he dodges and eludes the greyhounds, whose only chance of making a capture is to keep their eyes upon him. When the rabbit succeeds in escaping, for the time being, at once the hounds begin a serious of graceful leaps high into the air, turning their shapely heads rapidly in all directions in order to catch a glimpse of the game, which they invariably do if the cover is not too thick. They will repeat this effort again and again until they are called away to seek a chase in another part of the vineyard. When the rabbit leaves the protection of the vines or high growths of mustard, sage brush, "life everlasting," or the "black-eyed Susan" sunflower, he must seek other means to elude the quick eyes of the pursuing hounds. It is then that some very unique demonstrations of cunning are shown by the little animal. When almost within the grasp of the leading dog he will turn at a

right angle, going at full speed, or possibly make what appears to be a partial sommersault, and go back in almost the same direction from which he has been pursued. This plan succeeds beautifully; the dog being the heavier, and going with such impetus, overreaches his object and goes many yards before he can recover himself. In the interval, if the rest of the pack is not well bunched and obstructing his retreat, he has secured a new lease of life. He is now showing unmistakable evidences of "being winded;" so are the dogs; but some of the rear guard now come up to relieve the younger and more ambitious ones. The sly old jack sees his last and forlorn hope, —a washout; into this he drops out of sight of both dogs and hunters; and it is likely he has made good his escape, not by hiding in a hole, but by running along the tortuous turnings of the wash he easily keeps out of sight of the dogs. The riders and horses have all had a long, hard chase; and woe be to the one who is ignorant of California soil; for when the hedge and ditch are approached no sign of the latter is in view;—no warning is given by gently sloping banks until the horse's nose is hanging over the abyss, some five or six feet deep by as many wide. The supreme moment has arrived for the rider to exercise good judgment, or else dire disaster is sure to follow, as many a daring gentleman rider has found to his discomfort when he gathered himself together in the bottom of the washout; and some of the lady members of the Valley Hunt have been known to get into "a peck of trouble" by not giving their horses freedom of head and allowing them to take the hedge and ditch as some others did. (See frontispiece.)

The affair at the ditch has drawn the attention away, for the moment, from the dogs and the pursuit of game; but the hunters are rewarded for the temporary break in the day's run by finding that no bones have been broken, horse and rider receiving only a few scratches; and a trusty old dog who has gone off on his own account and run the jack down lays him at the feet of the hunters.

The runs are made in quick succession until near the appointed hour for luncheon, to be held in one of the many charming and secluded cañons or beneath the pleasant shade of the live-oaks or eucalyptus groves, where the invited guests and two or three score of members who have elected the carriage as being the safer and more comfortable means of hunting than in the saddle have assembled and are waiting for the arrival of the hunters before the tempting contents of the baskets are spread.

The hunters begin to arrive with sharpened appetites, and eager to narrate the hairbreadth escapes from being impaled upon grape stumps or deposited in some unsuspected ditch, all of which adds to the full enjoyment of the run; for a hunt without some element of danger in it is tame, as any cross-country rider of the Rose Tree and Radnor Hunts of eastern Pennsylvania or the Queen's County Hunt of New York will testify.

To the one who for the first time is experiencing the brilliancy and beauty of a midwinter day's outing in Southern California comparisons are truly odious. It requires a positive mental effort to make one believe that probably at the identical hour Eastern hunting clubs are taking "worm" and four-railed fences, galloping over hill and field with avidity if the dogs are in full-cry, wading creeks filled with floating ice, or plunging through snow-drifts, or facing a cutting norther. The conditions may be just the opposite, and instead of a hard-frozen surface a thaw may set in, which, if it has continued long, will not add to the pleasant features of a cross-country ride.

As the enthusiastic party is now seated around the table, which is spread on wild flowers, nothing but exclamations of joy are to be heard at the supreme pleasure of being present at such a novel feast. Many who for the first time have been

taking a ride after the hounds in California are anxious to express their feelings over the scene of such surpassing grandeur, where the golden rod, asters, lilies and lupines skirt the borders of the chaparral and sage-brush, and where the wise owl and squirrel, the latter sitting like jack in the pulpit, are in close proximity to the home of the honey bee. It is here the menu from Boston baked beans to New York salads is discussed, as is also the letter received in the morning's Overland mail, and the surroundings of far-away friends are compared with their own. Dull must be the individual who does not fall in love with a California winter's day. Here God's poems are the perfect days! Here it is so easy to live and hard to die; for the "rose-embowered" cottage and hay fields are in sight, and it is a paradise of flowers from which one does not wish to go, making the thought of dissolution an unpleasant one. The successful lady riders are now wearing the jacks' long silken ears in their jaunty riding-hats. These are to be preserved as trophies of the day's sport; and many a lady's boudoir in Chicago, Philadelphia, New York and Boston is ornamented with them; and should these lines meet the eye of a former guest of the Valley Hunt, on this winter day, and contentment with her surroundings in her Eastern home is her lot, she is to be congratulated.

The foregoing description of "a regular monthly meet" is merely a hint at what can be enjoyed almost any day of the year in Southern California, if one has the inclination.

The mind becomes bewildered and dazed with the innumerable attractive points that can be reached on horseback. It has become an old story with the average Californian to hear the praises of his landscapes and flowers sung until he wonders whether they will ever cease until the mountains shall pass away and the ocean breezes no longer cool the summer's fervid heat.

Before the rains begin and after the spring opens the shady cañons are mostly sought by the hunt for their monthly meets to eat their luncheons. An easy and accessible one is the far-famed Arroyo Seco, from whose bed the water is obtained which supplies the residents of Pasadena, and irrigates the almost countless orange and lemon trees and shrubbery on the lawns in the "crown of the valley."

The "Devil's Gate," always alluring as its illustrious namesake, which is an ideal natural park, where any month of the year one may be content to lounge away a day in sweet idleness, is frequently selected as the place to eat luncheon. Here beneath the stately live-oaks and sycamores, seated among the flowers, the baskets are emptied, while the squirrels and quail chatter and chirp to give warning of the approaching riders and dogs as they hasten toward the brink of the Arroyo, where the aroma of the boiling coffee and the merry laugh of the hunters fill the cañon.

The romantic and historic El Molino, or the old mill as it is usually called, is still another place where the members of the meet are always anxious to entertain their guests. What a succession of entrancing thoughts course through the mind when seated around this vine and rose clad structure, built originally by the old padres to grind their grain, when a century ago they taught the native the way to what they believed a better and more beautiful country. Vivid must be the imagination of the individual who can picture to himself a more beautiful place than can be found in the vicinity of El Molino. One is reminded of the descriptions given in the Conquest of Granada, where "Christian knight and turbaned infidel disputed inch by inch the fair land of Andalusia," and one can readily see its counterpart here, where the sky is so serene, the earth so beautiful, the air so pure, that the dwellers in sweet Alhambra near by might well be excused, if like the Moor of old they should imagine the paradise of their prophet to be situated in that part of heaven which overhangs their groves

of orange, citron and pomegranate, in which they are rejoiced by the song of the mocking bird and the chimes of the old Mission bells heard each day as the sun peeps over the snow-crowned San Bernardino range, and as it sets in the western sea.

The approach to the mill can be made through Oak Knoll, an enchanting place of itself, covered as it is with vineyards and shaded by the weeping willow, majestic oak and graceful pepper with its lace-like branches. The live-oak, of all trees, is worthy to be held as a domestic deity, before which every one should kneel, for the sake of its knotted and gnarled branches which reach out in such beauty and grandeur, so twisted and so long, to encompass in its embrace a party of hunters beneath its evergreen shade, who have had a lively run after a large jack started on the outskirts of Pasadena. The dogs may have had more than the usual difficulty in overtaking him, but his ears now adorn the lady's hat who first cried out "they are mine!"

The adjacent cañons are filled with huge live-oaks and sycamores from whose branches the wild grape and clematis hang in graceful festoons. This natural park is entered by the hunters by descending into a deep cañon which is only accessible on horseback. The coyote and wildcat may be started here in this retreat by the fox hounds; and when the wild-flowers are in bloom, acre after acre is covered with the sweet-scented heliotrope, daisies of the most delicate hues, as well as the violet of many colors, making a scene like fairy-land; but if the flowers are sweet and beautiful what words can express the impression made on the mind by the old live-oaks, under whose branches the cattle stamp out the long, long summers, so thick in most places that the sun's rays never strike the ground from year to year. A coyote whose monotonous and reiterated howls have made the nights hideous, and who has decimated the chicken corrals in the vicinity, is startled from his hiding place, but soon disappears among the chaparral and sage-brush. It would be useless to give chase with greyhounds unless he should retreat to the open country, when he would soon be overtaken and dispatched. In this case the brush is taken as the trophy of honor; his skin, as well, may ornament the library of the next in at the death.

The ride is continued through avenues and vistas of live-oaks beside a clear brook whose source is in the water-bearing hills to the north. An artificial lake is skirted where a solemn band of sheep are meditating after having filled themselves with the succulent alfileria. Still further on the hunters emerge from the cañon and come to the banks of a large lake which is now claimed by the shy "mudhen" who hurries away with unnecessary clatter and speed to hide among the tule, which is also the retreat of the coon as he fishes for the catfish so abundant. This body of water was formerly alive with wild geese and ducks; now only a few visit it in their migratory passages, prefering the immense expanse of suitable feeding grounds near the coast. The meet at El Molino on a clear day in March is one long to be remembered by the Hunt and its friends.

One more ride from among the hundreds just as full of interest and pleasure, and it will probably be seen why it is that a Californian who has tried to inspect nature for the love of it, generally accompanied by his trusty horse, will now and then take off his hat and make his bow from the summit of some symmetrical foothill to the landscape spread before him.

The early morning throughout the year is, beyond question, the proper time to start, especially if the sky is free from clouds, as is the case frequently enough to satisfy the most exacting.

This holiday will be in the early part of April. The Puente Hills will be the objective point, these being the

In at the Death.

natural boundary separating the San Gabriel from the Los Angeles Valley, where any month one can always meet with a kind reception from nature on their summits. A good point to enter the depression, through and up which you must ride, is beneath the oaks at Lincoln Park.

The appearance of the foothills is very deceptive in the clear California atmosphere, giving the impression, at a distance of several miles away, that one can canter his horse from base to top with ease; but after the ascent begins it will be imperative to make a zig-zag course. When the ridge is attained a gallop is taken. The magnificence and surpassing grandeur of the panorama is almost appalling since the revelation comes upon you so suddenly, making it beyond human conception to realize that so much beauty is actually wasted to those who do not mount their horses for an early morning run across a Southern California landscape.

Looking to the right and left into deep cañons on either side, widening out into peaceful meadows through which a clear stream is meandering, here and there a sheep-herder's camp is seen. This consists of the rudest apology for a tent,—the ground strewn with empty cans, the ever present "jerked meat" hanging on a line in the sun, a rickety table, soiled blankets, and a few cooking utensils. In looking at this, one gets a conception of how far a human being can fall below the idea of heaven's first law and be so totally at variance with the soul-inspiring efforts nature has been so prodigal with around him.

One after another of the small cañons are hunted by the fox hounds while the horsemen keep on the ridge with the greyhounds held in leashes, until a coyote, or, as frequently happens, two or three, may be seen leaving the brush simultaneously; and as they pass over the summit the greyhounds are turned loose, and even should a capture not take place it is a sight which any member of an Eastern hunt would enjoy.

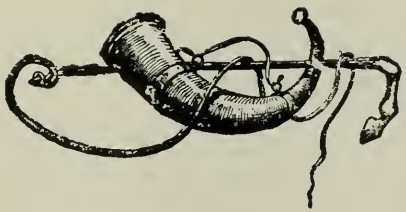
Following the crests of the hills for an hour, bearing to the southeast, Ramona Lake is reached. If the rains have been frequent and abundant, the lake has its banks full. This body of water gives an air of comfort to the surrounding landscape, and is a place where the thirsty horses may be refreshed before beginning the climb to the summit. The wild oats reach to the saddle skirts in many places, and are certain to give the feet a wetting if the ride is taken before 10 A. M. The alfileria, California's leading food for cattle and sheep, gives off an aromatic fragrance when it is crushed beneath the horses' feet, similar to the geranium, of which it is a species. The wild mustard shoots high above horse and rider's head. The poppy, though not so abundant here as nearer the mountains, yet is sufficiently prolific to give the outlying plains a color which looked upon once is apt to make a lasting impression upon the visitor, never to be obliterated from memory, and which will cause a feeling of homesickness for California and the San Gabriel Valley whenever the next ride is taken through snow and slush or over the average country road in the East at a corresponding season of the year.

Though the dogs may be filling the ravines with their music, driving the coyotes from their hiding places, the riders are too much absorbed with the beauties of nature to pay any attention to the chase which is in progress. They check their horses and either remain seated in the saddle or dismount, and while the horses are eating the rich, green grasses endeavor to take in the situation.

A stiff breeze is blowing, making an ordinary winter suit comfortable. The sky is devoid of clouds; and the party, composed of both ladies and gentlemen, look through the purple haze upon the broad acres of the far-famed Los Angeles Valley, so magnificent in all directions, the

city of Los Angeles, built on more than twice seven hills, then many smaller towns between the Puente Hills and the Pacific, which is shining and glistening only a short ride away, numerous ranches with their thousands of acres of waving grain, eucalyptus forests here and there, forty miles away Catalina Island resting like a huge whale on the Pacific just along the horizon, where some of the hunters have fished for the lively yellow tail, barracuda, and the monstrous jew fish, in its smooth, fairy-like waters surrounding it, reminding one of the Island of Capri, so charming to the Neapolitan.

Turning now to the San Gabriel Valley, at our feet lies Ramona Lake, on whose surface are floating wild ducks, consisting of teal, spoon-bills, a few mallard and some other varieties which took flight when the dogs approached before the climb to the summit began. From this point can be seen mountains as high as heaven, capped with snow with their smygmographic tracings against a clear sky, fertile on all their sides, their bases wreathed with vineyards and rich with every fruit. Here are clear streams of water which, before they left their deep mountain passes, were filled with trout, breaking into numberless cascades. Here are shady groves, fertile fields, lovely plains,—on the one side great warmth, on the other side delectable coolness despite the summer's heat. The soul that is "so dead" as not to be capable of admitting that a land where such scenes can be viewed from the saddle is appropriate for philosophy and worthy the habitation of the muses should not be commiserated if he or she is content to live where cyclones and blizzards vie with each other to excel in adding to human misery and the destruction of life and property. This is the sentiment of every Southern Californian who has penetrated its shady cañons, galloped over its flaming poppy fields, and followed the hounds with the Valley Hunt through orange groves, vineyards, and stopped to eat a volunteer watermelon in January.



"THE GREATEST OF THESE IS CHARITY."

By Emily Browne Powell.

THREE women stood together as the chime
Of distant bells rang in the Christmas time.
And lo! a vision, radiant and fair,
A heavenly presence, shone before them there!
The dear Lord stood revealed; He asked each one:
"In this bright year for me what hast thou done?"

The first said: "Lord, Thy voice seemed calling me
To distant lands, Thy messenger to be.
To carry on Thy work I have not failed;
In danger often, yet I have not quailed.
Among the heathen I have cast my lot
To teach the faith to those who know Thee not."

The second said: "Lord, I have tried to be
A faithful steward. With full hands and free
I've given of my wealth to feed the poor;
Oft I've brought hope to those who hoped no more.
Of pain and suffering I have eased the smart,
And taught to thank Thee many a grateful heart."

The third stood humbly there with downcast eyes.
"I have no wealth to give; I am not wise.
Dear Lord, 'tis little I have done for Thee;
But I have walked with all in charity.
At others' sins, I, conscious of my own,
Point no accusing finger, cast no stone."

The Master smiled down on the drooping head.
"Who e'er loves mine loves also Me," He said.
"Who e'er shows mercy shows it unto Me;
She hath all graces who hath charity."

KINDERGARTENS.

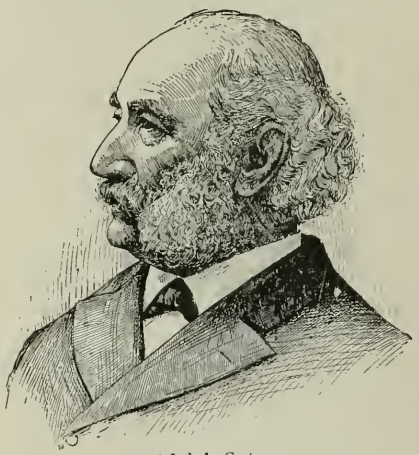
By Minna V. Lewis.

A MOVEMENT was begun thirteen years ago in San Francisco which may truly be said to have led by the hand "the baby figure of the giant mass of things to come." Such is the estimate to-day put upon the free kindergartens, the *alma mater* of neglected childhood.

While thirteen years may not have added greatly to the stature of the young giant, the most casual of observers cannot have failed to realize that, under the new dispensation, their influence has directed no small part of its plus strength, known as hoodlumism, into better channels.

In the conservation of this plus power, the force which, undirected, breaks window-panes, destroys peace and defies all law, is turned to the development of mechanical skill, the practice of right living and doing.

The man from an Eastern manufacturing town who, having watched with intelligent interest the work of the children during his visit to one of the kindergartens in San Francisco, saw with a keen business insight the bearing of such an education upon industrial pursuits and the future of the child, was but one of the many thinking men who have recognized the economic bearing of this undertaking. While from the first the relation of kindergarten training to a perceptible adjustment of things to law and order has been acknowledged, beginning with the fruit and vegetable dealers on the Barbary Coast, during the first year of the work there, who brought in a purse of seventy-five dollars to one of the kindergarten teachers as a tribute to the work that taught children not to nip their fruit or smash their windows as they were wont to do, down to the far-sighted, generous-hearted business men of the different commercial organizations who to-day support many of these institutions for the upbuilding of the community.



Adolph Sutro.

The disciples of Frederic Froebel, "the pedagogic apostle of freedom," are increasing in number every day. It is this plan of educating the whole being, this beginning at the foundation of things, which has come to offer more and more strongly each year since its adoption the most potent means to the solution of some of the gravest social problems. Beginning in Germany, this system has so affected its growth as to make it the intellectual and practical leader of Europe. In Austria, by Imperial edict, it has been made the basis of education; while in France, England and the United States the movement is making rapid progress. In our own country where, more keenly alive to the difficulties that beset us, our need for overcoming them is greatest, this ground plan of improvement has long occupied the best

thought of the community. Kindergartens have been established by private philanthropy; while the school boards of St. Louis, Boston and Philadelphia have adopted the system as part of their work with great success. In the minds of the educators, political economists and philanthropists of this country the time for its national adoption is not far distant. Pending that time, however, the work is being nobly carried by private organizations, nowhere more effectually or with as great rapidity of growth as in California.

The first inspiration to the work in San Francisco was given by Professor Felix Adler, President of the Society for Ethical Culture, of New York, who, with quick discernment, saw during his brief visit here in the summer of 1878 a broad field for this peculiar charity.

Imbued with the spirit of his earnestness, a number of prominent citizens, among whom were Mr. Solomon Heydenfeldt, Mr. S. Nickelsburg, Dr. J. Hirschfelder, Mr. S. W. Levy, Mrs. L. Gottig and Miss Emma Marwedel, the first kindergartner on this Coast, gave their aid to the new work, to such good purpose that before Mr. Adler had left the city the Public Kindergarten Society of San Francisco was formed and incorporated, with Judge Heydenfeldt as President, assisted by a number of earnest men and women, nearly all of whom are still in its active service.

The first free kindergarten was started on Silver Street in that most dismal part of the city known as "Tar Flat," and Miss Kate Smith, now Mrs. Wiggin, installed as teacher, a more enthusiastic, capable beginner of the work than whom could not have been found.

In 1885 this society reincorporated under the name of the Pioneer Kindergarten Society, and moved to quarters even more destitute, but whose darkness they still bravely help to dispel, and now sustain four kindergartens in different parts of the city. Its active members and subscribers are composed of many men and women of wealth and philanthropic spirit. Among them are the names of Mr. M. H. Hecht, Mrs. David Bixler, Mrs. N. D. Rideout, Mr. L. Gottig and Mr. Adolph Sutro, who has also the honor of being a generous contributor to each of the other societies.

Kate Douglass Wiggin.

The Silver Street Kindergarten Society, with as many supporters, has continued the work on Silver Street, under the untiring efforts of Mrs. Wiggin and her sister, Miss Norah Smith. This society now sustains three kindergartens known as the Crocker Class, in honor of Mrs. Harriet Crocker-Alexander, its benefactor; the Eaton Class, named for Gen. John Eaton, Ex. U. S. Commissioner of Education; the Peabody Class, in honor of Miss Elizabeth Peabody of Boston, the first woman to introduce the kindergarten in America, and the Little Housekeeper's Class, composed of girls from eight to thirteen years of age, graduates of the younger schools, who are here taught by a series of object lessons to perform household tasks on the well-regulated household plan and after the most simplified methods.

In connection with the other work, a school for the training of kindergarten teachers, opened by Mrs. Wiggin in 1880, is now being carried on by Miss Smith, from which most of

the kindergartners on this Coast have been graduated. Out of this training school has grown the California Froebel Society, organized for the better diffusion of kindergarten principles and the purpose of inspiring its members to keep pace with the best thought of the time.

It was shortly after the opening of the first free kindergarten on Silver Street by the Public Kindergarten Society, that Mrs. Sarah B. Cooper made her first visit there at the suggestion of Professor John Swett, a member of its Board of Trustees and one of the most experienced and successful educators in this country. From that hour her whole heart enlisted in the cause, Mrs. Cooper became the loyal, zealous champion of the work, and with pen and voice and every means she could command laid the foundation of the Golden Gate Kindergarten Association.

This Association, organized in 1879 by Mrs. Cooper as the specific work of her large Bible Class, having caught the enthusiasm of its leader, gave the greatest possible impulse to the work which has each year assumed larger proportions and its progress been attended by increasing zeal.

To-day there are thirty-two free kindergartens, with an enrollment of 2,600 children, in operation under the management of the Golden Gate Kindergarten Association, with whose thoroughly organized methods the best regulated public school system would almost suffer by comparison. The strict economy in the use of its funds and the efficiency of its methods have recommended the Association far and wide. More than 50,000 of its reports have been scattered broadcast over this country and Europe; and during the past year alone more than 7,000 letters were written by Mrs. Cooper and her daughter in reply to various inquiries concerning this great work and its organization elsewhere.

Over $260,000 have been given to the support of the Association since its organization, including the gifts of Mrs. Leland Stanford and several other large endowments, the careful disbursement of which sum has been the glad labor of Mrs. Cooper, the president, and its faithful officers and board. No salary has ever been paid an officer from the funds donated.

Mrs. Sarah B. Cooper.

A free training class, under the instruction of Miss Anna Stovall, one of the most accomplished of teachers, has recently been established in connection with this vast work, in which some thirty-five earnest young women are being trained in the kindergarten principles and methods. It is the aim of the Association to make this training class a model in every respect. No pains, no time, no money will be spared to perfect it, nor can its purpose be too highly commended.

The gifts for the maintenance of this splendid system are mostly from noble women, and the workers noble women who have here found their most worthy mission,—one that lies just as surely before them, before every body of earnest women, to be done for the common welfare of humanity as does the part of each individual woman in the smaller family of the home; and just so soon as she has

entered it will this larger maternity bring her proportionate joy.

Mrs. Leland Stanford, with the generosity of a warm heart, kindled toward all childhood in memory of her son, Leland Stanford, Junior, has given lavishly of her wealth to the cause. In the magnanimity of Senator and Mrs. Stanford this thought of the new education for the masses has stood side by side with their plans for facilitating the means to higher education in the Far West. Coeval with the Leland Stanford Junior University have grown the Leland Stanford Junior Free Kindergartens, seven in number and permanently endowed by a fund of $100,000, fulfilling in its broadest sense a plan for the ideal university that shall embrace the whole science of human life.

The thought expressed in the Leland Stanford Junior Memorial Kindergartens has been the seed-germ of five other memorial kindergartens in San Francisco alone, the T. Fuller Shattuck, the Lester Norris, the Pearl Dowda, the Emily P. Walker and the William Steuben Memorial Kindergartens.

The munificence of Mrs. Phœbe A. Hearst, whose heart is bound very strongly to this new impulse in education, supports three of these institutions and looks toward its development so earnestly that funds for the establishment and maintenance of a Manual Training School, supplementing the industrial training begun in the kindergartens and fitting the children graduated therefrom to become skillful artisans in the different lines of mechanical industry, have been promised, and the permanent endowment of such an institution insured.

Mrs. A. J. Pope, Mrs. C. P. Huntington and Mrs. K. S. Hart are among the others whose abundant means enable them to make generous gifts to the work.

But to the something more than mere wealth which has crowned this effort toward the uplifting of the rising generation in San Francisco with success there have been contributed the loving aid, the unswerving faith, the devotion of many self-sacrificing workers, without whose service no amount of wealth could have brought it about.

Mrs. Leland Stanford.

Mrs. Sarah B. Cooper, to whose great organizing power and untiring superintendence of the vast work the success of the movement is so largely due, has consecrated her very life to the cause. With a zeal that overcomes every obstacle and that makes generosity and self-sacrifice contagious, she has won not alone the rich but the co-operation of all to whom she appeals, until nearly the whole community has responded to the call; while the rare efficiency of the system over which she presides, the Golden Gate Kindergarten Association, has awakened the best thought of the whole country to the importance of this undertaking.

Of the results of so great a movement, the evidence of moral uplift in the localities where the kindergartens are planted, and the perceptible growth and unfolding of the powers and graces of body, soul and spirit of the children under its benign influence, too much cannot be said. Manifold as

are the evidences of its power for good, no statement can be cited that would more forcibly illustrate the fact than that of Mrs. Cooper, who, after careful investigation of the matter, affirms that she has found but one child out of the more than nine thousand that have been brought up in the kindergartens of the Golden Gate Association who has ever been arrested for offense against the law, and this after continued watchfulness of the police records and frequent inspection of the lists of inmates of the various houses of correction, and in face of the fact that these nine thousand children have all come from the localities that make the criminal element.

The sixty-five free kindergartens in San Francisco, including those in orphanages, asylums, hospitals and day homes, are all crowded to their utmost limit; and yet they do not provide for half of the little waifs that swarm its streets and who are one day to form one-half of that "giant mass of things to come," when, possessed of its full power and grown to what strength we know not, the time will have gone by for any effort toward its control to avail.

Crime cannot be hindered by punishment, and it has taken long enough years for the conviction to take hold of us; but the long and almost indefatigable attempts at reforming have served us one purpose if not the one we set out to gain. It is the oft-repeated story over again. What Froebel taught the few, experience has taught the many. The cry for a new order of things, the conviction that formative influences only will avail, the desire to begin further back, are based upon the study of failure. Careful investigations of our vast system of prisons, reformatories and workhouses and study into the causes of crime and poverty has revealed the want more plainly every year. It has been estimated that in the United States alone seven-tenths of the convicted criminals have never learned a trade or followed any industrial pursuit. Careful tabulation of the semi-criminals, loafers and occasional laborers in any of our large cities would present the same startling figures proportionately, as such an investigation exposed in the east end of London when, alive to the need of alleviating its darkness, the plan for supplying its want embodied in that splendid institution, the People's Palace, was carried out. Such a plan is needed in every large city, but supplementary to the training begun in the kindergartens. The underlying principle is the same in both, that the true problem of living is solved only when the right direction shall have been given and followed out in recreation as in work. With this motive in view the founders of the English institution,

Miss Nora Smith.

aside from its well-equipped technical and industrial schools and other educational classes, "in the belief that in the recreation which demands skill, patience, discipline, drill and obedience to law, man finds a deep well of interest and pleasure, not only in the enjoyment of the pleasure itself, but also in the energies and characteristics which have been trained in its acquisition," have provided such pleasures and instruction as shall ensure that end, and placed them within reach of the very poorest.

Within reach, but alas! not always in time. When the man or the woman has found for twenty, thirty or forty years his or her joy in sensationalism and excitement or worse, when the same years have been spent in vagrancy or violation of the law, the time for the direction of his or her powers has practically gone by. They must be taken at a more pliable age. Juvenal said: "The man's character is made at seven. What he is then he will always be;" while Aristotle urged that the very playthings of the child should have a bearing upon the life and work of the coming man. It is to carry out the suggestion not only of these two philosophers but the same thought all along the line of far-seeing philosophers, educators and economists since them that the kindergarten has had its being. Froebel's games and occupations develop the latent powers of the child, stimulate its creative faculties, inculcate habits of industry, order and perseverance, cultivate the taste, the intellect and feeling of the child, the very little child, before they have been perverted.

Take the child at the earliest possible age and place it in the kindergarten, away from the vicious tendencies that surround it, and you have begun just as near the beginning as it is possible to do. It was not born right, it is true, but you are making the prenatal history of the generations to come.

If we mold the character and direct the tendencies of the child in its tender years, the man and the woman will then be better ready for the real games and occupations of life. Give them early the knowledge they must have to live; teach them duties and we will have given them truly the rights they blindly clamor for now.

THE FIRST DAY OF WINTER.

By Herbert Bashford.

TO-DAY a pall obscures the sky;
And fiercely beats the chilling rain.
The seas grow tall, the foam flies high,
The crags along the shore complain.

A wild gust bows the great fir tops,
The cedar moans, the hemlock grieves,
A maple shakes down cold, clear drops,
And drowns the fire of fallen leaves.

A CYCLONIC GLIMPSE OF CALIFORNIA WEATHER.

By Lieut. Jno. P. Finley, U. S. A.

THE weather of any place is the sum of its transient meteorological phenomena. To find the sum of such occurrences in California will require more than ordinary calculation. In other words, there is variety in her weather as there is diversity in her industries. To understand these varying conditions one must consider, at least, the following important general features: (1.) The great extent of latitude embraced by the State. (2.) Its pronounced topographic outlines. (3.) Its position relative to the North Pacific Cyclone Belt. (4.) Its relation to the Japan and Alaskan currents of the North Pacific. To comprehend the meteorology of such a region one must become impressed with the necessity of extending the investigation far beyond the limits of the State. Surrounding atmospheric conditions for hundreds of miles must be closely watched to discover the source of those phases of cloud and sky which make the progress of peculiar systems of circulating air, under the influence of the axial rotation of the earth, which bring over large areas of country changes in temperature and degrees of precipitation affecting the prosperity of thousands of square miles of territory. You cannot study weather understandingly from your own doorstep.

Because of California's great extent of territory north and south she feels the effect of tropical influences as well as those of the temperate zone. Coupled with her varied topography, unequaled in the United States, the fluctuations of atmospheric pressure within the extreme limits of the North Pacific Cyclone Belt give rise to some anomalies in weather both extremely interesting and complicated. Why wonder at the results, with a surface contour affording extraordinary differences in elevation, from nearly 300 feet below to about 15,000 feet above sea-level, permitting variations in temperatures from torrid heat to Arctic cold, and changes in atmospheric humidity from the driest areas on the continent to the saturation of a tropical clime. The most skilled meteorologist will find ample scope for the exercise of his knowledge and professional training.

Being at one season largely within and at another largely without the predominating influence of cyclonic disturbances introduces peculiarities of weather and climate which distinguishes the meteorology of California from any other portion of the United States.

The proximity of two ocean currents essentially different as to temperature, course of movement and atmospheric effect, gives rise to a coast climate remarkably at variance with that of the interior valleys, only a few miles away, and still different from the adjacent mountain districts. No State in the Union is so uniquely situated, so diversified as to climate and weather, within such circumscribed limits.

All the various local and secondary causes are largely subservient to one superior and overwhelming influence, the action of the North Pacific Cyclone Belt.

The meteorology of the State as a whole, as well as of its individual portions, falls under the sway of this power. The notion must be discarded, that the weather of California is not dependent upon atmospheric conditions over adjacent regions to great distances, especially over States to the

east and north. This dependence arises from the fact that these adjacent States are nearer and therefore more strongly affected by the passage of cyclonic disturbances. All of these disturbances enter upon the coast from the North Pacific Ocean. They are huge atmospheric eddies which have developed in the air resting upon the warm waters of the Japan Current. The typhoon of the China and Japan seas becomes, later on in its course, the cyclonic disturbance which sweeps across British Columbia, thence to the region of the Great Lakes and further on to the Atlantic and Europe.

All cyclones cross the United States at a lower latitude in winter than in summer. This condition results, in part, from the apparent movement of the sun north and south of the equator, whereby the area of heat and moisture of the temperate zone reaches a higher latitude in summer and recedes to a lower latitude in winter. The atmospheric eddies enter the continent at about the 50th parallel, being about the latitude of the center of the northern portion of the Japan Current, which flows eastward from the Asiatic coast. The fluctuation north and south of the Cyclone Belt on the Pacific Coast depends then upon the change in the location of the areas of heat and moisture. These two elements constitute the food of cyclonic disturbances; and without an almost unlimited source of supply areas of low barometic pressure begin to fill up and disappear. Clouds and rain, with boisterous winds, are soon followed by clear, calm weather and a dry, cool atmosphere.

To understand the distribution of precipitation over any region one must clearly comprehend the essential characteristics of a cyclonic disturbance. Such information is especially necessary regarding the rainfall of California, for its occurrence and distribution are peculiar and unlike, in some respects, that of any other State.

As cyclonic disturbances may vary in diameter from 500 to 1,500 miles, and the centers invariably move eastward north of San Francisco, it would rarely, if ever, occur that the whole of any area could be shown on a chart of the Pacific Slope. From the Pacific to the Mississippi Valley the direction is a little south of east. From that river to the Atlantic the course is somewhat north of east. The forms of cyclonic areas are either elliptical or circular, and the former predominates on the Pacific Coast. The isobaric line of 30.00 inches marks the separation between the two principal classes of atmospheric disturbances, viz., the cyclone (LOW) and the anti-cyclone (HIGH).

An observant "new arrival" is not long in discovering that California has, during the year, two weather periods instead of four, known as the "wet season" and the "dry season." He learns that they are powerful factors in ascertaining the prosperity of the commonwealth. When nature, in a kind mood, arranges the relation of these two seasons with a marked uniformity of variations, then dame Fortune smiles upon the commercial and agricultural interests of the State. If the exact character of these seasons could be forcasted in advance, what enormous profits could be realized. Such long-range prognostications have never been vouchsafed to man, and there is no immediate prospect of his acquiring such extraordinary knowledge.

We must be content for the present, at least, with a much more limited degree of information, but yet not lacking in practical importance.

The two meteorological seasons of California are dependent, for their proximate occurrence, upon the distribution and frequency of cyclonic disturbances between the 40th and 50th parallels, and the rate of progress eastward, together with the energy displayed between the Pacific Ocean and the 100th meridian. In short, the cyclones move farther south and are of greater energy in winter (the "wet season") than in summer (the "dry

season"). A careful examination of the charts in the office of the Weather Bureau will show very clearly that the weather over any region depends upon the relation of the latter to the quadrants of the passing cyclonic or anticyclonic disturbance. According as one or another of the quadrants covers any region, so will be the successive phases of weather therein.

All forms of atmospheric precipitation are distributed over the earth through the agency of these systems of air circulation. They are of enormous extent and great power, drawing moisture from all available sources, carrying it to great heights in the atmosphere, where, by a marked change in its surroundings, the vapor is transformed into water and falls again upon the earth. The physical forces of evaporation and condensation cannot fulfill their mission in the production of atmospheric precipitation without the assistance of adequate means for setting up and maintaining a system of circulation for the distribution of the vapor of water throughout the lower regions of the atmosphere.

It has been found that these atmospheric eddies pursue certain paths over the continent of North America. There are two such lines of travel, one along the northern boundary of the United States, and the other from the West Indies northwestward to the Gulf States, curving at the 30th parallel north latitude, and moving thence northeastward over the Atlantic Coast States. The second path joins with the first one near Nova Scotia, where, together, they form a well-beaten path along the 45th parallel, of all cyclonic disturbances crossing to Europe.

It is a fact to which attention has not been drawn, that that portion of the United States most distant from the influence of the atmospheric eddies which travel the two storm paths embraces what is known as the middle and southern plateau regions. They include southeastern California, Nevada, Utah, Arizona, New Mexico, western Colorado and southern Wyoming. This may be called the dry region of the United States. It is well known as the region of least rainfall, and has been found to be the region over which the greatest atmospheric evaporation (about 100 inches annually,) takes place. There can be no doubt but the meteorology and climatology of this region depends most largely upon its geographical position regarding the cyclonic belts over the United States. California's share in this relationship cannot be understood without a comprehensive and graphic view of the whole situation.

The reader must already begin to see some evidence of the preponderating influence in the distribution of precipitation over the United States, and especially the Pacific Slope. Of course all general and predominating influences are counteracted here and there by local differences which, in this discussion, may be briefly referred to as topographical. The limits of this paper will not permit of considering this branch of the subject particularly. The tabulated data given herein will illustrate some of the effects of local surroundings. The dry region of the United States can never be other than it is, so far as atmospheric conditions are concerned, without a great physical change, which would completely reverse the circulation of the Japan Current in the North Pacific Ocean, and bring it nearer the California coast. It must needs bathe this coast as does the Gulf Stream the coast of the South and Middle Atlantic States. Then would the dry region become, in weather and climate and in vegetation, as that of the Gulf and South Atlantic States.

We find that the weather of California, like that of any other region, is dependent upon the atmospheric conditions surrounding it for hundreds of miles. If it were nearer the Cyclone Belts, its two famous seasons, the "wet" and the "dry," would be changed into a more uniform distribution of precipitation throughout the year and a less uniform distribution of

temperature. Such a modification of its climate would be detrimental to some of California's greatest industrial pursuits. Its variety of weather and climate is unrivaled in the United States, and therefore the peculiar adaptability of the State for the growth of the choicest fruits, grasses and cereals. Its geographical position is such that the seasonal fluctuation of the North Pacific Cyclone Belt carries the rain area far to the north and protects the crops that would otherwise suffer severely from heavy cloudiness and drenching rains.

The precipitation of the "wet season," when the Cyclone Belt takes a more southerly course, is generally heavy; and there is stored in the earth a supply of moisture that frequently goes far toward supplying the needs of summer. When this source fails, resort must be had to either surface or sub-irrigation. But the "dry season" in California does not mean an entire absence of rain throughout the State. Rains occur on the northwest coast from San Francisco northward, and in the mountains in the northeast and southeast portions, during the summer. They are frequently heavy, with thunder storms in the southeast portion. The central valleys are the dryest in summer, especially in July and August, where in some places no rain falls during these months for a period of several years. In any case only the lightest showers would occur, at long intervals, resulting from the drifting over and settling down into the valleys of heavy clouds from the mountains. Such precipitation is likely to occur when the snows of the previous winter have been heavy and the mountains remain snow-capped throughout the year.

The average rainfall values at selected stations in California are shown in Table No. I. Records are given from both the regular weather stations and those where the observations were made by voluntary observers. By such a selection a better idea can be given of the distribution of precipitation over the State.

As average values do not give an idea of the extremes, I have added an extra column to show the greatest seasonal amount reported with date of occurrence. An examination of this table will show what marked variations exist between summer and winter rainfall. It will also call attention to the fact that even the "wet season," with its southerly trend of the cyclone belt, fails to produce adequate precipitation for southeastern California. The values in this table will not show, satisfactorily, the average depth of snowfall in the mountain districts, a very important factor in forecasting the rains for July and August, and ascertaining the probable water supply for irrigating purposes. Some idea of the distribution of this form of precipitation can be obtained from the selected stations, Tehachapi, Summit, Colfax and Susanville. Heavy snow in the mountains in winter will probably result in heavy rains in the valleys in summer. The enormous extent of surface covered with snow, from a few inches to many feet in depth, offers an extraordinary opportunity for rapid evaporation under the burning rays of the morning sun, through a clear, crisp atmosphere. Heavy clouds appear o'er the lofty ranges by about 12 noon, and when the sun begins his downward course, and the air currents are pushing down the mountains, great masses of clouds are hurled together and carried over the valleys, attended by smart showers and occasional manifestations of atmospheric electricity. Here we have a brief view of the conditions under which summer rains occur in the mountain districts of California, especially in the southeastern portion of the State and the adjacent regions of Nevada and Arizona. Even these may be called cyclonic rains, for they invariably occur under the influence of a barometric trough of low pressure, covering the eastern portion of the Pacific States, the center of the cyclonic disturbance being in British Columbia, north of Montana The effect of this trough may not disappear until the central area moves eastward

into Dakota and Minnesota, like a monstrous sea-serpent dragging his tail behind him.

A low barometric pressure is especially favorable to evaporation and the development of ascensional air currents, which force great quantities of vapor into the air that is rapidly condensed into clouds. Clouds consist of small drops of water light enough to float in the air. Fogs are clouds resting upon or very near to the surface of the earth. When the drops of water become large enough and sufficiently heavy to fall to the earth they are called, collectively, rain. I have quickly depicted here the transitions from water in the liquid and solid state, through the vapor or gaseous form, to the liquid state again. What a powerful engine is the atmosphere, and how nicely adjusted must be all the cogs, wheels, springs and compensations of this exquisite piece of machinery, that it never wears out nor breaks down, nor fails to do its work at the right time and in the right way.

The effect of the fluctuation of the North Pacific Cyclone Belt is also shown in the probability of rainy days for various parts of the State (see Table No. II), and in the percentage of clear and cloudy days as given in Tables Nos. III and IV. It will be noticed that the probability of rain for the valleys is proportionately much lower in summer than the probability of cloud formation. This is largely due to the fact that while the northward deflection of the Cyclone Belt is sufficient to prevent rain it does not remove the influence of cyclonic circulation in the production of cloud formation. At times the sky will remain overcast for several days and pass away without precipitation. The condensation has not been sufficiently vigorous under cyclonic circulation to develop drops of water of sufficient size to fall to the earth.

These tables furnish interesting and valuable data for comparative climatic study, and show the importance of systematic meteorological investigation. Perhaps very few of my readers will be able to realize the vast amount of labor in computations, and the long years of constant watching secretly, represented in this little collection of figures. It is a patient but determined study of Nature, who refuses to reveal herself without the most ingenious and prolonged effort of man.

No portion of the United States offers richer opportunities for meteorological research, or will afford greater practical results from thorough and systematic investigation, than the weather and climate of California. No State is in greater need of such scientific inquiry; and if successfully prosecuted it will greatly aid in the development of her rich resources. It will bring them to the attention of thousands who would be glad to enjoy the fruits of "perpetual summer;" the opportunities of a wonderfully varied climate and soil; the invigorating influence of unsurpassed mountain and air scenery; and the advantages of marked uniformity of temperature along a coast line of marvelous extent and diversity.

Theoretically California should furnish the best and most varied health resorts and sanitariums in the United States. Within her borders most every form of wasting disease should find the means of temporary, if not permanent, relief.

While our present knowledge warrants this assumption, yet practically the truth of this statement, in all necessary details, must be developed and tested by adequate scientific research.

The agricultural, horticultural and commercial interests must be more fully informed as to the probabilities before them, and every line of industry afforded the means of weighing thoroughly its chances for growth and success.

A reliable knowledge of probable weather changes and of climatic effects is rapidly becoming a daily necessity in all occupations.

TABLE No. I.

MONTHLY AND ANNUAL AVERAGE RAINFALL, IN INCHES, AT WEATHER BUREAU STATIONS IN CALIFORNIA, FROM RECORDS FOR MANY YEARS.

Stations.	Jan.	Feb.	Mar.	Apr.	May.	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.	Annual.	Maximum Seasonal Amount.
San Francisco .	5.06	3.76	3.07	2.04	0.62	0.15	0.02	0.02	0.16	0.85	2.85	5.20	23.80	49.27—1861-62
Eureka	7.63	5.61	4.55	4.15	2.05	1.07	0.10	0.02	0.73	2.73	3.95	7.25	39.50	73.99—1889-90
Red Bluff. . . .	5.97	3.87	2.54	2.18	0.78	0.37	Trace	0.05	0.41	1.22	2.84	3.76	23.99	61.65—1877-78
Sacramento. . .	3.77	2.89	2.86	1.95	0.69	0.13	0.03	Trace	0.11	0.68	2.06	4.52	19.69	36.36—1852-53
Fresno	1.30	1.21	1.21	1.64	0.30	0.13	0.00	0.00	0.12	0.39	1.21	1.28	8.79	16.62—1885-86
Keeler	0.25	0.54	0.24	0.64	0.41	0.22	0.17	0.10	0.27	0.27	0.18	0.38	3.67	5.76—1887-88
Bidwell	4.24	2.71	2.25	1.68	1 37	1.13	0.31	0.20	0.38	0 96	2.08	3.46	20.77	37.20—1866-67
Los Angeles. . .	3.93	3.76	1.90	1.34	0.35	0.09	Trace	0.08	0.01	0.35	1.49	2.73	16.03	32.16—1883-84
San Diego. . . .	1.55	2.22	1.38	0.90	0.44	0.07	0.01	0.19	0.03	0.29	1.02	2.16	10.26	25.97—1883-84
Yuma	0.37	0.48	0.20	0.11	0.04	Trace	0.15	0.45	0.15	0.12	0.36	0.38	2.81	5.86—1884
OTHER STATIONS.														
Fort Gaston . . .	10.56	7.99	7.50	4.70	1.74	0.75	0 12	0.11	0.89	2.67	7.69	10.70	55.42	125.36—1865-66
Crescent City . .	13.69	10.44	6.29	8.58	2.75	2.31	0.65	0.08	3.49	10:22	11 37	18.90	88.77	113.45—1881-82
Nevada City. . .	10.93	7 68	8.57	5.14	2.06	0.60	0.04	0.03	0.54	1.82	6.77	12.09	56.27	115.26—1867-68
Mammoth Tank	0.19	0.43	0.09	0.11	0.02	0.00	0.06	0.13	0.03	0.14	0.16	0.49	1.85	3.11—1883-84
San Bernardino.	3.66	3.03	1.97	1.75	0.44	0.06	0.02	0.08	0.05	0.43	1 58	3.10	16.17	37.51—1883-84
Campo	2.36	2.80	2.38	2.58	0.27	0.05	0.60	0.37	0.01	0.41	1.13	2 21	15.17	19.63—1882-83
San Luis Obispo	4.68	3.75	2.81	2.05	0 35	0.14	Trace	Trace	0.03	0.72	1.95	4.53	21.01	42.40—1883-84
Tehachapi . . .	1.28	3.54	1.68	1.83	0 38	0.13	0.01	0.09	0.03	0.42	0.73	1.52	11.64	18.77—1883-84
Summit.	8.39	8.96	6.78	5.77	1.68	0.62	0.08	0.01	0.19	2.34	2.82	7.32	44.96	87.99—1879-80
Colfax	8.36	6.77	6.28	4.97	1.63	0.52	0.00	0.00	0.32	1.74	5.06	7.67	43.33	89.80—1889-90
*Susanville . . .	8.86	5.48	5.53	1.35	4.49	0.60	0.03	0.07	0.08	2.09	1.89	9.84	39.42	. . . . .

* Record for only two years.

TABLE No. II.

MONTHLY PERCENTAGES OF PROBABILITY OF RAINY DAYS AT WEATHER BUREAU STATIONS IN CALIFORNIA, FROM RECORDS FOR MANY YEARS.

Stations.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
San Francisco	38	38	31	25	11	8	2	1	5	11	22	34
Eureka	50	43	37	34	21	17	3	2	11	29	35	46
Red Bluff	34	32	28	29	17	11	2	1	6	12	25	34
Sacramento	31	31	29	25	9	5	1	1	4	11	18	31
Fresno	22	25	19	22	8	3	1	1	3	8	15	20
Keeler	10	14	9	17	9	4	7	4	4	5	14	8
Bidwell	44	40	29	27	32	31	13	4	6	12	38	45
Los Angeles	18	23	24	21	9	5	1	1	1	7	11	17
San Diego	19	25	22	19	11	5	2	2	2	7	10	17
Yuma	5	7	4	3	1	1	3	9	3	2	4	7

TABLE No. III.

MONTHLY PERCENTAGES OF PROBABILITY OF CLEAR (SUNSHINE) DAYS AT WEATHER BUREAU STATIONS IN CALIFORNIA, FROM RECORDS FOR MANY YEARS.

Stations.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
San Francisco	52	54	54	58	60	60	60	57	66	68	62	53
Eureka	47	59	52	44	55	61	72	83	76	60	55	50
Red Bluff	55	57	61	60	65	80	90	94	89	79	66	52
Sacramento	58	67	65	66	76	86	95	97	91	83	72	65
Fresno	57	55	62	60	76	89	96	98	94	84	76	53
Keeler	73	75	74	74	79	89	85	89	90	86	75	74
Bidwell	42	53	51	54	53	58	82	84	83	69	50	43
Los Angeles	68	63	58	53	57	61	71	75	77	74	74	69
San Diego	61	59	52	54	46	50	53	60	62	61	65	63
Yuma	76	78	78	84	88	92	83	78	90	88	81	80

TABLE No. IV.

MONTHLY PERCENTAGES OF PROBABILITY OF CLOUDY DAYS AT WEATHER BUREAU STATIONS IN CALIFORNIA, FROM RECORDS FOR MANY YEARS.

Stations.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
San Francisco	48	46	46	42	40	40	40	43	34	32	38	47
Eureka	53	41	48	56	45	39	28	17	24	40	45	50
Red Bluff	45	43	39	40	33	20	10	6	11	21	34	48
Sacramento	42	33	35	34	24	14	5	3	9	17	28	35
Fresno	43	45	38	40	24	11	4	2	6	16	24	47
Keeler	27	25	26	26	21	11	15	11	10	14	25	26
Bidwell	58	47	49	46	47	42	18	16	17	31	50	57
Los Angeles	32	37	42	47	43	39	29	25	23	26	26	31
San Diego	39	41	48	46	54	50	47	40	38	39	35	37
Yuma	24	22	22	16	12	8	17	22	10	12	19	20

AT MONTEREY BAY.

BY VIRNA WOODS.

ON sea-washed rocks a dainty lichen grows ;
Back from the shore are lofty cypress trees ;
And in the waves the frail anemones
Softly their purple fringes ope and close.
A lonely gull on slow wing seaward goes ;
A shallop drifts before the freshening breeze ;
Full are the lingering hours of calm and ease ;
Full is the soul, world-weary, of repose.

The wind is singing to the monotone
Of the deep tides ; and singing in the pines,
Through whose soft waving foliage lightly shines
The sun on silver beaches as it shone
Twelve decades past, when from the branches swung
The Mission bells that Junipero hung.

KENTUCK.

By Nellie Blessing Eyster.

THE scene was picturesque and not uncommon at that date, the spring of eighteen hundred and fifty-five.

It was about eight o'clock in the evening, and around a small campfire in the depths of a Colorado cañon sat six men, travel-stained but robust, playing a game of cards, and passing, at times, the whisky flask, as swiftly as though it was a weaver's shuttle.

All were young, all were bound for the same goal,—the gold mines of California; and all alike seemed men to whom adventure was welcome and recklessness considered a virtue.

The horses were tethered a short distance from where the party was seated, their occasional neigh of satisfaction mingling harmoniously with the mysterious noises of the dense forest and the quiet good humor of the travelers.

As the play progressed the voices of the players grew more subdued and earnest.

"Hold up, Gaston!" suddenly shouted one of the group, as he spoke impulsively grasping the hand of his opponent and scattering the cards which he held to the right and left.

With an oath, Gaston sprang to his feet. His handsome face, distorted with anger—and flushed with whisky—glared for an instant upon the startled band. Drawing his revolver from his belt he fired two shots into the breast of his accuser; and ere the exclamations, "Coward! Coward!" which burst from one of the confused group, as he sprang forward to catch the falling man, had died away, Gaston, on his horse, was fleeing through the outer darkness.

* * * *

I was idly sauntering through the court of the Palace Hotel, San Francisco, recently, musing upon the question, "What is reality and what is unreality?" when my attention was arrested by a voice asking earnestly:

"Have you ever, when completely awake, had a vivid impression of seeing or being touched by a living being, or inanimate object, or of hearing a voice, which impression, as far as you could discover, was not due to any external, physical cause?"

The speaker was one of two middle-aged, practical, matter-of-fact-looking men, who, seated in arm chairs, were enjoying an after-dinner cigar; but instead of politics, the World's Fair, or the condition of the stock market, their theme, evidently, was some phase of occultism, a branch of science in which I am much interested, and into which my line of thought was, at that moment, running.

I had a *table d'hôte* acquaintance with both gentlemen; so, stopping, I asked, "Will you permit me to hear the answer to that question? Mine is no idle curiosity."

"Certainly. Of course," said Mr. Franc, "I have a satisfactory one, I think, which grew out of an episode in my early life; at least I think it worth the telling.

"I'll give you the simple facts, leaving off the filagree and poetry, although there was enough of each about my hero to cover three hundred pages of a first-class novel.

"When I first 'took a claim' on what is now called Josephine's Creek, a small stream in Southern Oregon, I felt that I was in Pandemonium. I was only twenty, had left a refined home in Ohio to seek my fortune, and knew no more about the 'roughs' and 'toughs' that made up a miner's camp in those days than does a baby of theosophy. Every day brought some

new revelation of the depravity of the human race, as there represented; and I would soon have lost my faith in my kind but for the presence of one man, who was known simply as 'Kentuck,' and about whom, dare-devil as he was, there was a fascination indescribable. Every word and movement was emphatic. Swear! I never heard such expletives as came from his lips, although, to his credit be it said, he never used the name of the Divine One.

"He was of the Buffalo Bill type of physique, but much handsomer. He was as muscular as an athlete, and woe to the fellow who provoked a blow from his clenched fist; for it proved a potent 'knock-down argument.'

"There were vague, untraceable rumors in the air that he was an outlaw, and this belief was strengthened by the fact that he avoided all reference to his early history; and, as he seemed satisfied with being known by the name 'Kentuck,' it was deemed expedient to gratify his whim. In those days it was considered too personal to evince much anxiety about names. In truth, it would lead, sometimes, to an 'unpleasantness,' and, occasionally, to a funeral.

"A trading-post had been established in an adjoining valley, which was the headquarters for all the miners in that vicinity, and they were many. Here, on Sundays, most of us went to settle our bills, lay in fresh supplies, exchange items of news, and in too many cases drink and gamble away the proceeds of the week's work.

"One remarkable feature about Kentuck was that he never, while I was in camp with him, 'took a hand,' although he would watch the progress of a game as a cat does a mouse, and somehow no fellow dared prevent or resent it.

"When drunk, which was not infrequent, he would wander off, alone, as fierce as a wild boar, returning after a day or two, master of himself and of most every other fellow among us; for he was as magnetic as he was plucky.

"There were times when his dialect was like that of the 'poor whites' down South, a mixture of negro and Anglo-Saxon, and at others, but rarely (for he was seldom off guard), his phraseology was elegant. I never saw such a dual character as he presented. He seemed, however, utterly devoid of sentiment, and as cold, scoffing and relentless as a Mephistopheles.

"The creek was simply 'The Creek' at that time, no other name designating it.

"One morning, while at work, we were surprised by the sudden appearance of a stranger,—a gentlemanly looking man, leading by the hand a little girl about nine or ten years old. All work was instantly suspended. If a winged cherub, just from Paradise, had lit upon the stone pile near by, the men could not have gazed upon it with more reverence and admiration than they did, for a few minutes, upon the face of that child.

"The man's story was not an uncommon one for those times. He had started across the plains, that season, with a good outfit, a wife and three children, all full of hope of a happy home on the Pacific Slope. Sickness and accident had done their work. He reached Oregon City penniless and broken-hearted, with only this one child left to him to make life endurable.

"'The sole object with me, now, is to make enough money to get my little Josephine back among her kindred and friends,' he said, 'and I thought I could more readily do that in the mines than elsewhere.'

"The miners, to their credit be it said, gave him a generous welcome. An unoccupied cabin was hastily fitted up and placed at his disposal, and before night the news had spread that 'a young lady' and her father were living in 'Old Webfoot's den.'

"Perhaps it was 'Kentuck's' example, perhaps it was the little speech he made around the mess fire where a few of the roughest of our crowd were assembled that first evening; but surely

I never would have believed that the presence of a girl of such tender years could have created such a commotion among those irresponsible men as did that of little Josephine.

"She was a pretty, refined looking little creature, very shy and timid at first; but when she realized that every one whom she met had a smile and kind word for her all restraint and fear wore off, and she was as happy as a bird.

"Her father, a quiet, broken-spirited man, found employment, at once, among the miners, at good wages, thanks to Kentuck, while 'little Josephine,' as all called her, kept house after a child's fashion for him.

"How those days have impressed themselves upon my memory! Often, when the cabin was 'tidied up,' as she used to say, she would come and watch us at our work. Frequently she would be invited to come on the claim and try a pan of dirt, 'to bring us good luck, you know,' as some of the boys would say, coaxingly.

"She became quite an expert at 'panning out;' and, as a liberal pinch of gold dust was always surreptitiously dropped in the dirt she was prospecting, her morning calls often brought more to the common fund than her father's entire day's work.

But one day news came that 'little Josephine's father,' the only name by which he was known, was 'down with the fever.'

"Poor man! He was illy adapted for the hard life he was leading. It was wonderful how some of those rough fellows tried to lighten Josephine's care! One or another was in constant attendance upon him. Any delicacies that could be procured in the way of canned goods were to be found in his cabin; and a general feeling of relief pervaded the camp when it was known that 'he would soon be on his pegs again.'

"But he couldn't work a stroke, even when he had left his bunk, and we soon saw that he was sinking with discouragement. During all this time Kentuck kept in the background as much as possible; but he was the prime mover in all that was done for the comfort of the sick man, and the protection of Josephine from rough words or indelicate actions. Ever since her coming there had been a great change in him. We all saw but could not define it. Evidently some long-sleeping memories had been awakened, but of what nature I, for one, could not even conjecture. He never spoke to Josephine but with uncovered head, and his eyes would follow her with somewhat of a loving worship with which a devotee looks upon the picture or statue of a saint. I noticed that he had never touched a drop of whisky since the pair had come. But few of the men in our immediate neighborhood possessed sensibilities sufficiently fine to comprehend either this conundrum of a man or his motives; and as so little was known of his antecedents he was always, more or less, an object of suspicion.

"One evening, about six weeks after 'little Josephine's' arrival, having been absent all day, Kentuck sauntered into camp, about sundown, with a pair of dead jack rabbits slung across his shoulder.

"'They'll make a nice stew for the old man,' he said to me, nodding towards Webfoot's den, as he passed on to his own cabin.

"A quiet-looking stranger of about Kentuck's age, 'hailing from Arkansas' he said, had been loitering around the neighborhood all day, prospecting, and at that hour was sitting on a stump, whittling. Kentuck, with a light step, strode past him, like a young giant, without seeing him.

"Not so the stranger. He sprang to his feet, looked after him with intense gaze until he had entered his cabin, and then approached me.

"'Who is he?' was the curt query. I was not at all reticent those days, so with boyish eagerness I told all I knew (which was but little), uncon-

sciously, I think, dwelling on his affectionate and chivalrous care of little Josephine.

"Among other proofs of his fine perceptions of propriety, I remember telling him about Kentuck having one day given the girl a whistle which he had made, telling her that he was a light sleeper, and that if anything went wrong in the cabin to blow on it and he would be sure to hear it and to come to her aid.

"'Where will he be to-night?' asked the stranger.

"'Can't tell,' I answered, for somehow the expression of the man's face at that moment puzzled me. I could not define it, but it awakened a suspicion in my mind that Kentuck was the object. The stranger left me without further words.

"That night was starless, and about nine o'clock I chanced to see Kentuck leave his cabin and go across the bar towards 'little Josephine's.'

"Under other circumstances the incident would not have attracted my attention; but my curiosity was now alert, and fearing, I knew not what, I determined to follow him. I did so noiselessly. I crept like a cat.

"When within forty or fifty yards of Josephine's cabin, Kentuck seated himself, drew his pistol from his belt and laid it by his side, filled his pipe and seemed to have settled down for a good smoke. For about half an hour I watched him, when it occurred to me that he was keeping guard over little Josephine's cabin.

"Fact, and it leaked out, afterwards, that such had been his habit ever since the child had come.

"Ashamed of my suspicions, I was about creeping back as I had come, when I heard and saw Kentuck spring to his feet with a cry:

"'Halt! Who goes there?'

"I was not near enough to hear the reply, but soon the two were in conversation, and once I was able to recognize the voice of the Arkansas stranger.

"It was not in my mortal man to resist the desire to know more about the two, so mysteriously connected, I felt; so I listened, as best I could, by moving a little nearer. I could hear but snatches. The Arkansas man addressed Kentuck by the name of Gaston. I gleaned that some time previously a man had been shot and killed, and that his brother had offered a thousand dollars for the apprehension of the murderer. Then I distinctly heard the rich voice of Kentuck saying:

"'Burns, now's your chance for a cool thousand; I'll surrender to you. Life is not worth the living.'

"The reply was:

"'No, I can't do it, old Pard. I found you merely by accident. In the words of a holier man than you or I, "Go, and sin no more."'

"I got back to my cabin somehow, and I felt as though I had been stealing.

"The stranger left the next morning, and for days I avoided seeing Kentuck, but when I got a chance to grip his hand one evening I did it with an impulse of loyal comradeship that I could not resist, but which he could not understand.

"One Sunday morning the usual crowd assembled at the store, with the exception of Kentuck, who was generally the first to be there, and the last to leave.

"The morning was half gone, and all possible surmises as to the cause of his absence discussed, before he made his appearance. He walked up to the bar, making no reply to the varied greetings which he received, until one of his friends said mockingly:

"'We concluded you had gone to church this morning, old boy.'

"Waving aside the proffered bottle and glass he turned to him and said in a tone that attracted the attention of all:

"'Jim, I think I have been there.'

"A dead silence followed the remark. The card players ceased their game,

glasses remained untouched, and all were wondering if Kentuck had lost his senses, when he continued:

"'Boys! I'll tell you the whole story. Little Josephine's being here has set me to thinking more and more of a little sister whom I loved like my own life, and whom I left behind a good many years ago. If she is alive I know she is a woman now, and I'm not fit to be called her brother, but to me she'll always be a little girl, just about like Josephine.

"'I keep thinking how would I feel if I knew she was here, alone, amongst a lot of men like us and not a woman within fifty miles;—I understand all about that,' he said in reply to numerous angry glances directed towards him; 'I know there's not a man on the creek that would let any harm come to Josephine while he lived, if he could help it, but that's not the thing. She ought to be among her friends at home.'

"He paused a minute and continued, 'I came down by the cabin just now, and hearing some one talking I went up to the door, thinking some of our fellows were there; but boys, it was the old man praying, and she was on her knees by his side. He allowed he didn't care what became of him if his little girl was only back with her kindred once more, and he wanted help to see some way to get her there.

"'Now, boys, that was a good prayer and ought to be answered, and we are the ones to answer it. It's nothing to us but everything to her, and if we don't make up a purse that will take them back to the States we deserve never to pan out another color.'

"The trader meanwhile had not been idle. He knew the kind of men with whom he had to deal. He saw what the result of 'Kentuck's sermon' (as it was afterward called) would be, and had taken down from his shelf one of the largest of his stock of miner's purses and arranged his gold scales for business. When Kentuck laid his purse of 'dust' on the counter, saying, 'Weigh five out of that for a starter,' he went at it as though it was an every-day occurrence. Soon five ounces of the precious metal were transferred; another purse was tossed on the counter with the request, 'do so to mine.' Some of the fellows were 'strapped' and would get their more fortunate friends to 'put up an ounce or two' for them, until some sixty ounces in all were contributed.

"Arrangements were made with a packer, who was to start for Portland the following morning, to see the father and daughter safely there; and much against his entreaties Kentuck was selected to call on the 'old man,' and to tell him what had been done.

"'I'd almost rather be drawn and quartered,' he said, and his perplexed countenance indicated his reluctance.

"He found the two at the cabin, and after a few minutes talk about cinnamon bears and jerked venison started to go away, then turning suddenly, said:

"'I came pretty near forgetting a message for you. Some of the boys thought that maybe the reason you didn't go back to the States before winter set in was because you were a little 'short,' so they chipped in a few pinches to make a home-stake for you, and as I came by the store they asked me to leave it here with you. The packer starts for Portland in the morning and would be mighty glad, he said, to have you go with him. If you do, you can get to 'Frisco in time for the next Panama steamer and be at home in less than a month. Without giving the completely overwhelmed man time to say a word, nor casting even a glance to Josephine, he hurried away.

"But he had not gone ten yards before the child had reached him. Taking his horny hand in both her soft palms, while tears of joy ran down her cheeks, she exclaimed:

"'Oh, Kentuck! I know it all. Something inside tells me. This is all your doing, and I will always pray to God to bless you;" and drawing his bearded face down to hers she kissed

him between his eyes and on his forehead.

"Unable to speak he rushed toward his cabin, and throwing himself on the floor cried like—like a woman. Fact, I saw him, but I doubt whether he had shed a tear before since he had been a child. He was a queer mixture! Most of the boys were on hand the next morning to give the travelers a good 'send-off,' Kentuck getting there just in time for a hurried good-bye, but no hand-shake. His face hadn't a bit of color in it, but no sooner were they out of sight than he turned and said:

"'The creek'll seem lonely without her, boys; she's left it forever, but let's keep the name here. Let's call it the 'Josephine;' and thus christened—for love baptized it—it has remained to this day. I never saw that fellow, who had always before been the leader, as I said, in all the deviltry going on in the camp,—I never saw him smile until a letter came to the store in due time, written by Josephine and addressed to him. It was the letter of an artless, affectionate child, expressing her gratitude to all the 'boys,' him particularly, and reporting their safe arrival. Kentuck read it aloud in the store, put it in his blouse pocket, and I never again heard him mention her name.

"However, I soon after left also, to try my fortune in another and distant field, and after a few years of hard 'knocking around,' during which I heard nothing of my old comrades on Josephine Creek, the little incident, and the one man who had given my life a tinge of romance while there, seemed to have faded out.

"It was about fifteen years after, when, with a company of surveyors, of whom I was one, we were obliged to make a week's halt, within a few miles I thought, of the locality of my first old mining camp. We had not been settled twenty-four hours when an uncontrollable desire seized me to hunt up the old camp on the creek and see what its fortunes had been. It was winter, and the sky was murky when I began my wanderings, afoot. No one seemed inclined to accompany me, and I purposed returning before night. You never saw an Oregon snow-squall, did you? Well, it's about the suddenest thing on earth but a quake. This one was no exception. In less than an hour I knew I was lost and my shouting didn't seem to go six feet from my mouth. Night came on. I was dazed and almost blinded, and seeing ahead of me what looked, in the twilight, like the roof of a cabin, I made for it. I had just strength left to kick the door open, when I fell, exhausted, but fortunately inside the doorway, and managed to close it.

"Unconsciousness is sometimes a blessing in disguise. I awoke with my head as clear as a bell, but I couldn't move. My limbs seemed turned to stone. I had lost all idea of time, and it was as 'dark as Egypt.' I could move my fingers after some effort, and found myself still upon the floor where I had first fallen. I had no sensation of hunger nor cold, but that awful darkness and stillness was oppressive.

"Some expressions stand for nothing until one has realized their meaning. Such a one is, 'straining the ear to catch the slightest sound.' I strained mine with an intensity that I would have thought impossible under other circumstances, but no sound greeted me. Perhaps I had been stricken blind and deaf, I thought, and I was about calling for help, when an indescribable fear of hearing my own voice overcame me. My eyes were wide open, as I said, and soon the vision of my past life, from my earliest childhood up to the moment of my recent leaving of my party, unrolled before me like a panorama. Fact! I never saw anything like it. The whole scene was more realistic than memory could possibly have produced. In it all, however, I realized that I was lying, rigid and almost motionless, upon a hard floor. Doubtless I was approaching a condition of incipient insanity, I thought.

Then a voice which I had not heard for years seemed to reach the most sensitive center of my being. It was as distinctly audible to my ear as is mine to yours, this minute, and the exclamation, 'Great God, Kentuck, where are you?' burst from my lips. My own ears heard it, and I knew then that I was not dead. Circles of light, such as one sees behind the suddenly closed eyelids on a sunny day, were moving before me in a bewildering whirl, but threw no light or radiance on my surroundings. I was not terrified, but rather soothed.

"Again Kentuck spoke, and I seemed to see him (as I had seen the vision of my life) with his arms folded, and a tender smile upon his face, looking straight into mine. I cannot recall his clothing nor stature. I saw nothing but his handsome face, refined and colorless, looking into mine as though he was talking to my soul. He said: 'Do you know where you are? This is old Webfoot's den, and you are snowed in. But help will come, have no fear. Find little Josephine; she is in San Francisco, Pacific Street, with her uncle, John Dunbar. Find her. I — have — expiated — my — crime — by — re — pent — ance — and — fa — ' The circles of light were growing less and less in size and intensity, and as the voice failed to impress itself upon my ear soon all again was darkness and stillness, and I seemed to relapse into my previous unconsciousness.

"I'll tell you, I wouldn't go through that experience again for any man's millions, and yet I was not frightened. I cannot analyze it."

"And who found you?" I asked, for up to that period of the story neither of us listeners had spoken.

"The men of my party. I had been there forty-eight hours. Would you have believed it? I was a week getting over what I thought was a sort of cataleptic attack, or something like it."

"'And the place! Was it, indeed, old Webfoot's den?'

"It was. We afterward explored the old camp, for the snow soon melted. There little Josephine and her father had lived their brief stay with us, and behind it, not forty feet from the east bank of the creek, was a mound, near a clump of young pines, and on the head-board, roughly but deeply carved, was the name,

"'KENTUCK'—1858.

"When I read it my hair stood on end with a sudden horror, for surely, I thought, with his spirit released from his body, where might it not wander! I said nothing about my 'vision'—as I called it in my own mind—for months, but I resolved that if ever I got to San Francisco again I would find out if such a man as John Dunbar lived in it. It was nearly a year before I had the opportunity, but I found him, and 'little Josephine,' his beautiful niece and housekeeper, was there sure enough. *She's mine now*, has been my wife and home-maker for many long and happy years; and but for 'Kentuck,' whether in the body or out of the body I know not, I'd surely never have found her."

"'Then you must believe that your 'vision' was no mere hallucination,'" said the gentleman who had opened the conversation, and who had been even more than I a most interested listener.

"Believe! I know it was not. The facts prove it. I have given them to you, as I said at the beginning, without any varnish of the imagination.

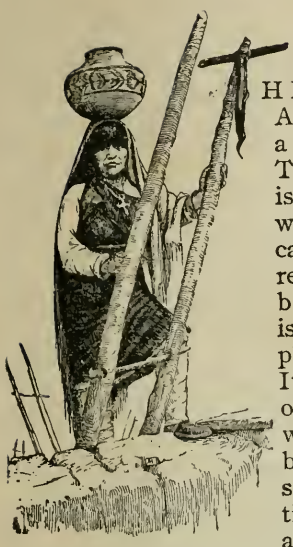
"My wife did not know for some years after having left 'the creek' that Mr. Dunbar, who had been shot over a game of cards while preceding the rest of his family across the plains, was the brother of her father.

"She says that next to me she believes in her heart of hearts she loves best Kentuck, who is her ideal of perfect manhood. Strange, is it not? Poor fellow! He must have died soon after I left the camp.

"Maybe the two worlds, the Seen and the Unseen, overlap each other, and the purified Kentuck of my night in old Webfoot's den is nearer to me now than he could have been while in 'the flesh.'"

THE CITY OF THE SKY,—ACOMA.

By Charles F. Lummis.



HERE is one Acoma*. It is a class by itself. The peer of it is not in the world. I might call it the Quéres Gibraltar; but Gibraltar is a pregnable place beside it. It is the Quebec of the southwest; but Quebec could be stormed three times while an army climbed Acoma unopposed. If as a defensible town there be no standard whereby to measure it, comparison is still more hopeless when we attack its impregnable beauty and picturesqueness. It is the garden of the gods multiplied by ten, and with ten equal but other wonders thrown in; and with a human interest, an archæological value, an atmosphere of romance and mystery that would have maddened Ruskin, Humboldt and Hawthorne, it is a labyrinth of wonders of which no person alive knows all, and of which not six white men have even an adequate conception, tho' hundreds have seen it in part. The longest visit never wears out its glamor; one feels as in a strange, sweet, unearthly dream, —as among scenes and beings more than human, whose very rocks are genii, and whose people are swart conjurors. It is spendthrift of beauty. There are half a hundred cattle and sheep corrals, whose surroundings would be the fortune of as many summer-resorts in the East, and scores of untrodden cliff-sentineled gorges far grander yet. If there is any sight in the world which will cling to one, undimmed by later impressions, it is the first view of Acoma and its valley from the *mesa* † as one comes in from the west. After the long, slow slope among the sprawling cedars, one stands suddenly upon a smooth divide, looking out upon such a scene as is nowhere else. A few rods ahead, the mesa breaks down in a swift cliff of six hundred feet to a valley that seems surely enchanted. A grassy trough, five miles wide and ten in visible length, smooth with that ineffable hazy smoothness which is only of the southwest, crowded upon by noble precipices, patched with exquisite hues of rocks and clays and growing crops,— it is such a vista as would be impossible outside the arid lands. And in its midst lies a shadowy world of crags so unearthly beautiful, so weird, so unique, that it is hard for the onlooker to believe himself in America, or upon this dull planet at all. As the evening shadows play hide and seek among those towering sandstones it is as if an army of Titans marched across the enchanted plain. To the left beetles the vast cliff of Kat-zí mo, or the Mesa Encantada, the noblest single rock in America; to the right, the tall portals of two fine cañons,—themselves treasure-houses of wonders; between, the chaos of the buttes that flank the superb mesa of Acoma. That is one grand rock—a dizzy air-island above the plain—three hundred and fifty-five feet high, seventy acres in area upon its irregular but practically level top,—a stone table upheld by ineffable precipices which are not merely perpendicular but in great part actually overhanging. The contour of those cliffs is an endless enchantment. They

* Pronounced Ah-co-mah, accent on first syllable.

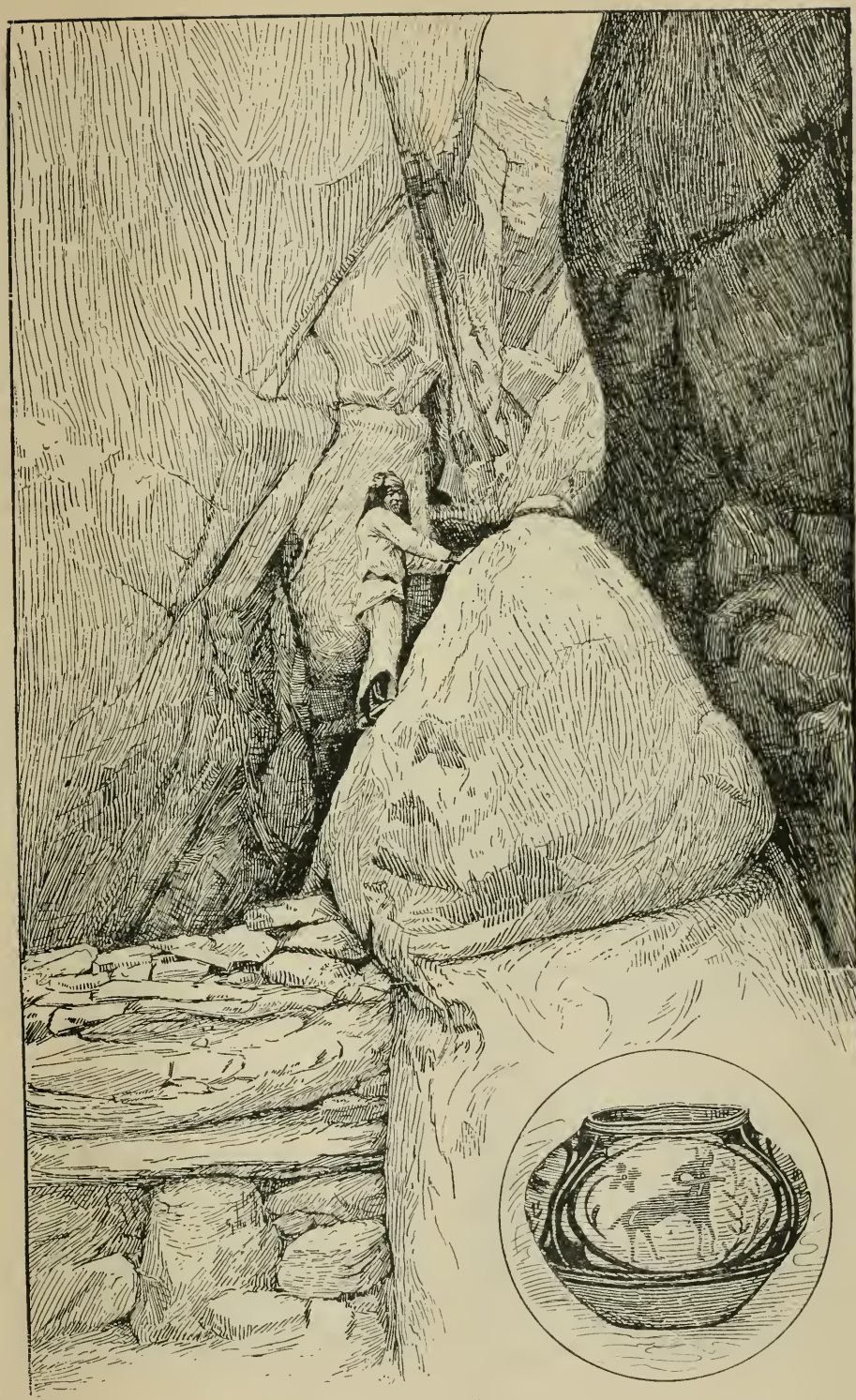
† Table-land with cliff sides.

are broken by scores of marvelous bays, scores of terrific columns and pinnacles, crags and towers. There are dozens of "natural" bridges, from one of a fathom's span to one so sublime, so crushing in its savage and enormous grandeur, that the heart fairly stops beating at first sight of it. There are strangest standing rocks and balanced rocks, vast potreros and fairy minarets, wonderlands of recesses, and mysterious caves. It is the noblest specimen of fantastic erosion on the continent. Everywhere there is insistent suggestion of Assyrian sculpture in its rocks. One might fancy it a giant Babylon, water-worn to dimness. The peculiar cleavage of its beautiful sandstone has hemmed it with strange top-heavy statues that guard grim chasms. The invariable approach of visitors is to the tamest side of the mesa; and *that* surpasses what one shall find elsewhere. But to outdo one's wildest dreams of the picturesque, one should explore the whole circumference of the mesa, which not a half a dozen Americans have ever done. No one has ever exhausted Acoma;—those who know it best are forever stumbling upon new glories.

Upon the bare table-top of this strange stone island of the desert, seven thousand feet above the level of the sea, stands a town of matchless interest,—the home of half a thousand quaint lives, and of half a thousand years' romance. How old is that mysterious sky city no man may know. In the far gray past Acoma stood atop the Mesa Encantada, three miles north; but a mighty throe of nature toppled down the vast ladder-rock which gave sole adit to that dizzy perch,—twice as high as the now Acoma. The people were left homeless in the plain, where they were tending their crops; and three doomed women, left at home, were shut aloft to perish upon the accursed cliff. But when the Spanish world-finders saw this magic valley the present Acoma was already an ancient city, from whose eternal battlements the painted natives looked down upon the mailed invaders as many hundreds of feet as centuries have since then faded. There stand, so far aloft, the quaint homes of five hundred people—three giant blocks of stone and adobe, running east and west near a thousand feet, and skyward forty—and their huge church. When one has climbed the mesa to the town and grasped its proportions, wonder grows to a daze. No other town in the world is reached only by such vertiginous trails, or rather by such ladders of the rock; and yet up these awful paths the patient Quéres have brought upon their backs every timber, every stone, every bit of adobe mud to build that strange city and its marvelous church. There are timbers fourteen inches square and forty feet long, brought by human muscle alone from the mountains twenty miles away. The church walls are sixty feet high and ten feet through; and the building covers more ground than any modern cathedral in the United States. The graveyard in front, nearly two hundred feet square, took forty years in the building; for first the gentle toilers had to frame a giant box with stone walls, a box forty feet deep at the outer edge, and then to fill it backful by backful with earth from the far plain. In the weird stone ladders the patient moccasined feet of forgotten centuries have sunk their imprint six inches deep in the rock. Antiquity and mystery haunt every nook. The very air is hazy with romance. How have they lived and loved and suffered here in their skyward home, these quiet Hano Oshash,—the Children of the Sun!

Acoma is thirteen miles south of the Atlantic & Pacific Railroad, in the western half of New Mexico. The best stations from which to reach it are Laguna (its daughter pueblo) and McCarty's, from either of which places an Indian may be procured to transport the visitor by farm-wagon.

Acoma figures in our very first knowledge of the southwest; and the earliest European eyes that ever saw



The Stone Stairway.

it marveled as we marvel yet. In spite of the closet historians, Cabeza de Vaca never saw New Mexico, which was discovered only by the heroic Franciscan, Fray Marcos of Nizza,* in 1539. He was the first civilized man who ever looked upon that strangest landmark of our antiquity, a pueblo town. But he never got beyond the pueblos of Zuñi,—the famed "Seven Cities of Cibola"—though he heard of Acoma. In 1540 the most remarkable of all explorers of America, Francisco Vasquez de Coronado, saw Zuñi, and a little later came to the more wondrous town of which the Zuñis had told him,—Há-cu-que, Ah-co, Acoma. Of its salient wonders he has left us a very accurate description. We may well imagine that the awestruck savages were no more astounded at their first sight of fair-faced strangers than were the latter at that thrice-wondrous town. There were grizzled veterans there who had been with the great Captain Cortez in his matchless conquest of the southern wonderland; but they had never found anything like this. The adobe city of Motecuzoma, in the bloody lake of Tezcuco,—it was bigger, but what was it to this sky-built citadel? That with its strong walls and narrow dykes was ill enough to storm, and worse to retreat from; but what would be a Noche Triste among these grim cliffs? Fortunately, there was no need to learn. The Acomas received the wondrous strangers kindly, taking them for gods; and Coronado and his heroic little band pressed on unmolested to the Rio Grande and to their unprecedented march of exploration in chase of the gilded myth of the Gran Quivira.

It was near half a century after Coronado's gallant but ill-starred exploits before the adventurous Spaniards were again tempted to the discouraging deserts of our southwest. Truly there was little enough to tempt them. Utterly disappointed in the golden legends which had led them to such rovings as no other race ever paralleled anywhere, for (again in despite of the arm-chair historians) all tales of rich Spanish mines in New Mexico and Arizona are absolutely untrue, and, finding almost as little of other attractions as of gold, they long devoted themselves to the more grateful countries to our south. It was not until that preëminent figure among the colonizers of America, the unspoiled millionaire Juan de Oñate, came with his five hundred thousand dollar expedition, that permanent work began to be done in New Mexico; though before him, and after Coronado, Chamuscado, Espejo and de Sosa had made notable successive explorations here. In 1581 Espejo visited Acoma, and there saw the astounding snake-dance which now survives alone in remote Moqui,—a dance wherein the half-naked performers bear living, mortal rattlesnakes in their hands and mouths. Espejo also was treated in Acoma, and gave us a good description of its wonders, though his guess at the population was as wild as his guesses at the other pueblos. He was the one glaring exception to the painstaking accuracy of the Spanish explorers in their chronicles of wonders seen.

The first real foothold of Europeans in Acoma was achieved in 1598, when the Acomas voluntarily submitted themselves to the authority of Oñate and became vassals of the Spanish crown, swearing to the Act of Obedience, whose purport was fully explained to them. But the submission was not in good faith. The Indians had no idea of real surrender; but these stranger Men-of-Power might not be openly opposed, and it was best to move by treachery. The war captains had already laid their plans to entrap and slay Oñate, believing that his death would materially weaken the Spaniards. But Oñate's lucky star led him out of the unsuspected danger; and with his wee army he proceeded on that grim desert march to Moqui.

* Facts first established by Bandelier's exhaustive research.

Scarcely had he gone when his lieutenant, Juan de Zaldivar, arrived with a dozen men from a vast journey. The Acomas enticed them up into the town, fell upon them by daylight, and bungled them to death with clubs and flint knives. Five bleeding heroes leaped down the ghastly cliff,—a leap unparalleled. Wonderful to tell, only one was killed by that incredible fall; the remaining four lived, and finally escaped.

Old Church at Acoma.

In the following month—as soon as the weak Spanish resources could be marshaled—Oñate sent a little band to punish treacherous Acoma. Never did soldiers march to a forlorner hope; and never in all history was there a greater feat of arms than the storming of that impregnable rock by Vicente de Zaldivar with seventy men—of whom less than threescore were engaged in the assault—on the bloody 22d, 23d and 24th of January, 1599. The forcing of that awful cliff, the three days' death-struggle hand-to-hand, the storming of that fortress-town, room by savage room, time records nothing more desperately brilliant. These smooth, gray rocks, whereon I dream to-day, were slippery,—red then with the life-blood of a thousand heroes; for here Greek met Greek, and ghastly rivulets ran down the hollows and trickled over the cliff to the thirsty valley. This drowsy air was split with the war-cry of Santiago and the shrill enemy yell of the Hero brothers; and where yon naked babes sport dimpled in a dimpling pool, stark warriors wallowed in a grimmer bath, and gasped from

dying lips undying hate. Over yon dizzy brink I toss unanswering pebbles to the deep plain, where maddened savages sprang forth to death in spatters. And where yon statuesque maiden walks placidly, a great gay *tinaja* of water perched upon her shapely head, a gray, tattered, bleeding Spaniard received the surrender of the scant remnant of crushed Acoma. In the precious epic left by Villagran, the soldier poet, who was *pars magna* of those bitter days, we have still a long and graphic description of a heroism which history could ill afford to lose.

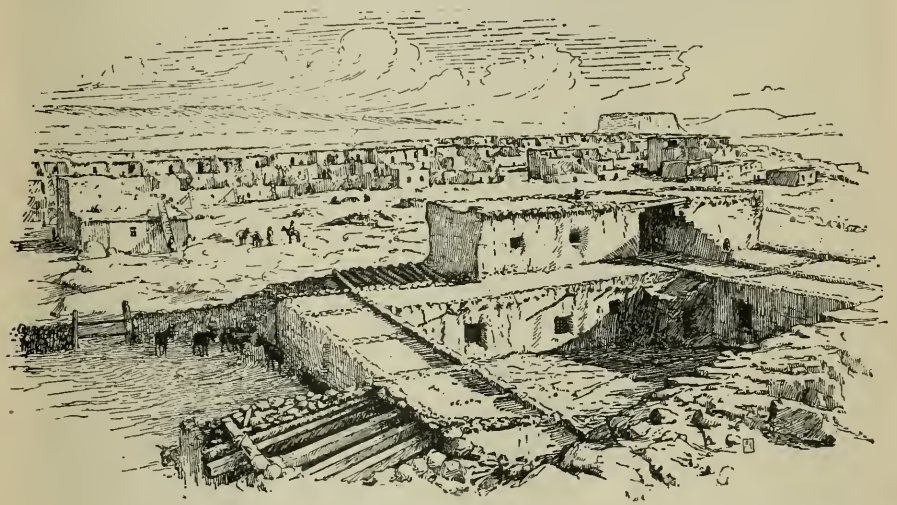
Thirty years later there was another capture of Acoma, as remarkable and as heroic as Zaldivar's marvelous assault, but with other weapons. In that year of 1629 came the apostle of the Acomas, brave, gentle Fray Juan Ramirez, walking his perilous way alone from distant Santa Fé. His new parishioners received him with a storm of arrows. There is a current legend that they threw him off the cliff, and that his priestly robes upheld him miraculously and saved his life; but this is a myth without foundation of fact. It probably sprang, partly, from confusion with the marvelous and real escape of Oñate's four men, and partly from a misunderstanding of the Indian folk-lore. The undaunted Franciscan faced the wrath of the savages, and finally won their hearts. For a score of years he lived alone among them, taught them to read and write, and led them to Christianity. The first church in Acoma, built two centuries and a half ago, was one of the monuments of this as noble and successful a missionary as ever lived.

And then came the awful month of Santana, 1680, when the Pueblo thunderbolt burst from a clear sky upon the doomed Spaniards. Nowhere else in the history of the United States was there ever such a massacre of Caucasians by Indians as on that red 10th of August. More than a score of devoted missionaries, more than four hundred heroic Spanish colonists, were butchered then, in a blow that fell all across New Mexico at once; and the pitiful remnant of the invader was driven from the land. In Acoma was then the good Franciscan, Fray Lucas Maldonado. How his treacherous flock fell upon the lone martyr; if they thrust him off the wild precipice that girt his parish, or beat out life from the quivering clay with clubs and stones, or spilt it from gashes with the cruel flint knife, we may never know. All that is left to us is the knowledge that he was slaughtered here, and here fills an unknown grave; and that the dearly built temple of the white God was razed to the earth. With it went the thumbed church-books, that would have been so precious to history and to romance to-day.

When Diego de Vargas, the re-conqueror, took back New Mexico in 1692, Acoma surrendered at once to his formidable force of two hundred men. In 1696 the high-perched pueblo again rebelled. Vargas marched against it, but could not storm the deadly rock; and the rebellion was never punished. The Acomas, however, seeing all the other pueblos submitting to the humane invader, gradually relented from their defiance and fell into line. The mission was re-established, and the church rebuilt, about the year 1700. Since then the quaint town has dwelt in peace. In 1728 was the last attempt at a pueblo uprising, but in that Acoma was not concerned; and the Franciscan Fathers labored undisturbed in their lonely field. The last Franciscan in New Mexico, Fray Mariano de Jesus Lopez, was priest of Acoma more than a generation ago. He it was who settled the strange quarrel between Acoma and Laguna over the possession of the oil painting of San José, presented by Charles II. of Spain to the Indians three-quarters of a century before,—a remarkable case, which figures interestingly in the reports of the Supreme Court of New Mexico. The good old fraile met death by the accidental discharge of a venerable pistol.

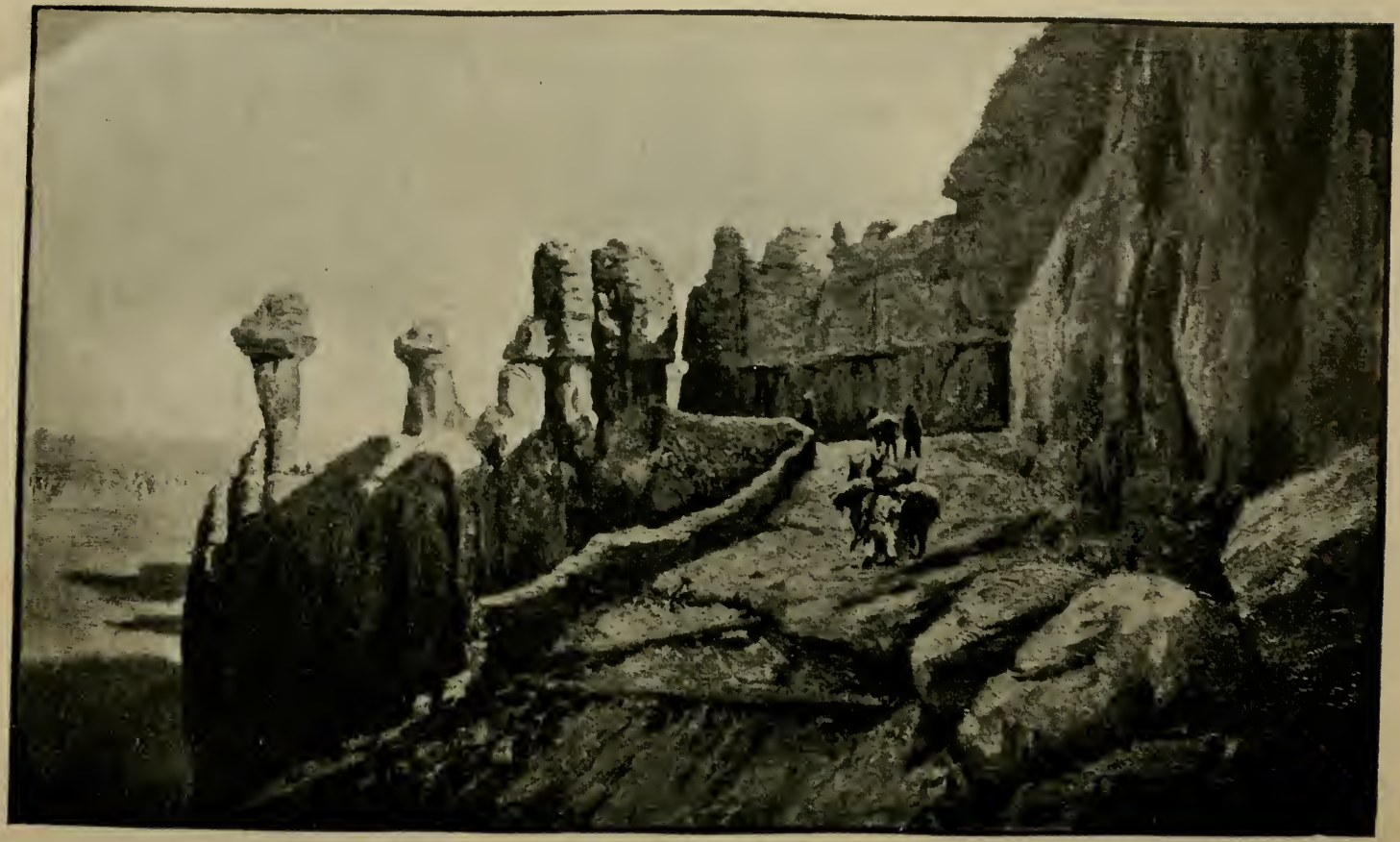
Laguna, by the way,—itself a very interesting spot, directly upon the A. & P. R. R., where its strange architecture is the wonder of thousands of travelers,—is the newest of all the pueblos. It was founded July 4, 1699, by refugees from Acoma (which contributed a large majority) Zia and Cochiti. Later it received recruits also from Zuñi.

The people of Acoma are quaint as their remarkable city. In their very simplicity breathes an atmosphere of the mysterious. Tangibly they are plain, industrious farmers, strongly Egyptian in their methods despite the steel plow and the Studebaker wagon of recent adoption. Their lands are 95,791 acres, confirmed by U. S. patent. Of this area the great majority is available only for grazing; but the valley wherein the mesa stands, the well-watered valley of the San José, twelve miles northwest, wherein is their summer pueblo of Acomita, and some minor areas, are threaded with irrigating ditches, and rustle with corn and wheat, chile, beans and wee peach orchards and melon patches. Their crops are adequate. They have enough to eat, enough to sell for luxuries. The dark storerooms in their curious houses are never empty; and in the living-rooms hang queer *tasajos* (twists) of dried muskmelon for dwarf pies, bags of dried peaches for the same end, jerked mutton from their own flocks, jerked venison from the communal hunt, parched chile, and other staples. In a corner is always the row of sloping lava slabs, neatly boxed about, whereon the blue corn is rubbed to meal with a smaller slab. Along the walls hang buckskins and moqui-woven mantas,* cougar-skin bow-cases beside the Winchester, coral necklaces and solid silver necklaces, the work of their own clever smiths, and many other aboriginal treasures. The cleanly and comfortable wool mattresses are rolled and laid on benches with handsome and often costly Navajo blankets, for a daytime sofa. By night they are unrolled upon rugs or canvases on the floor. In one corner is the wee but effective adobe fireplace, with chimney generally of unbottomed earthen jars, and in another a row of handsome *tinajas*, painted in strange patterns, full of fresh water.



Bird's-eye View of Acoma.

* Dress of Pueblo women.



The Road to the City of the Sky.

Outside, the house is even more picturesque. Each building is solid for several hundred feet, but cut by cross-walls into separate little homes which never have interior communication with each other. The block is three stories high, with a sheer wall behind, but terraced in front so that it looks like a flight of three gigantic steps. Save in a very few cases of recent innovation, there are no doors to the lower floor; and the only entrance to a house is by ladder to the roof of the first story, well back upon which the second story opens. The only entrance to the first story is through a tiny trap-door in the floor of the second and down a ladder. The third story and the utmost roof are reached by queer little steps on the division walls. The doors are nearly all very tiny, and the windows, save of a few spoiled houses, are merely big sheets of translucent gypsum, set solidly into the opening.

The costumes of the people are strikingly picturesque and even handsome. That of the women in particular is Oriental, characteristic and modest. Not only that, but it is costly. These quiet folks, whose facial appearance is generally comely, are far from naked savages.

The main mesa of Acoma is an indented oval; but at the south it is half yoked by an impassable hyphen of crags to a similar and equally noble mesa. So the whole rock, at a bird's-eye view, strikingly resembles, in shape, a pair of bowed spectacles. There are no dwellings on the southern mesa; but thither leads—down the side of the crag-hyphen and up again—a trail, deep worn in the rock, to the great reservoir, chief of the countless hollows which serve Acoma for water-works. This reservoir—a picturesquely beautiful cavity in the solid rock—should be seen at sunrise, when the strange lights and shadows, the clear image of its bluff walls in the mirror of a lakelet, make it a vision never to be forgotten. On the main mesa are a great many somewhat similar tanks, large and small; the natural capacity of the larger ones is increased by damming. Those nearest the houses are used as the town washtubs for clothing and children, —for the Acomas are very cleanly,— and the farther ones for drinking-water, of which the great tank on the south mesa, however, furnishes the main supply. In the high, dry air of this altitude, these natural stone reservoirs keep the rain-water cool and fresh the whole year around; and the supply almost never fails. When it does, there are fine springs in the plain whereupon to draw. Every drop of water used in the houses is brought by the women in three to five gallon *tinajas* upon their heads,—an exercise which may be largely responsible for the superb necks and chests and the confident poise of head notable among all Pueblo women. There is no more picturesque sight than the long file of these comely maids and matrons marching homeward in the sunset glow with their careless head-burdens.

Across the far, smooth valley the curling gramma is dotted with broad herds of horses, cattle, burros; and back in the surrounding wilderness of table-lands are great flocks of sheep. Nightly, as the sun falls back upon the huge black pillow of the Mesa Prieta, the hundreds of horses and burros are driven to the mesa's top by a new trail which has been builded with infinite toil since peace came. By the old trails—which sufficed the town for unknown centuries—not even a goat could mount the giant rock.

Such, to the casual sight, are the folk of Acoma, and such their surroundings; but, as one looks, there grows consciousness of the mystery within. Here and there are windowless rooms, reached only by a trapdoor in the roof and by a tall, rude ladder topped with mystic symbols. No stranger may enter there; but white-headed *principales* climb in and out, and strange muffled songs float off over the housetops far into the night,

Acoma from the Mesa.

with now and then the dull beat of the tombé; and now and then is the watcher aware of an invisible spiral of smoke curling above the dark hatchway,—from the sacred fire that never died nor ever shall. When Pa-yát-ya-ma, the Sun Father, shows his ruddy face above the eastern mesas, and again when he sinks into the dark ridges of the west, there are stirless human statues upon the housetops that show for more than careless look-outs. In the houses are mysterious symbols which the stranger dare not touch. In wild cave shrines above and below the cliffs are thousands of unknowable sticks tufted with downy feathers, miniature bows and arrows like those of Mau-sa-we and O-ya-we, and wee imitations of the magic hoop. Quaint, tiny parcels of the sacred corn-meal, wrapped and tied with the precious husk, are stowed everywhere in crannies of the infinite rocks. Everywhere are these hints of solemn mysteries, into which the visitor will do well not to pry. In a dizzy eyrie of the southern mesa, safe enough from the inquisitive, is perched a perfect cliff-house,—startling link back to antiquity. Few strangers have ever seen it; few ever will, for the climbing is a neck's worth; but there it is, gray, impassive relict of the Forgotten. There are strange, symbolic footraces and stranger dances, the least of which the world may see on the feast of San Esteban, the patron saint of Acoma, Sept. 2d, and on other holy days; but upon the chief ones no stranger has ever looked. They are more secret than the Inquisition.

Beside the sun-seared graveyard, where the dead of centuries sleep unmindful that their crowded bones are jostled by each newcomer unto rest, is a miniature mountain of breakage. If you watch when the still form, swathed in its costliest blanket, has been lowered into its narrow bed; when upon the earthen coverlet has been broken the symbolic jar of water; when from the tottering belfry has pealed the last silver clang of the high bell with its legend, "San Pedro, año 1710;" when the wailing mourners have filed away to the desolate house where the Shamans are blinding the eyes of the ghosts, that they may not find the trail of the evanished soul on its four-days' journey to Shi-pa-pu,—then you shall see borne forth jars and handmills and weapons and ornaments and clothing, to be broken and rent upon the killing-place, that they may go on with their departed owner. When old men meet and part you may see that each takes the other's hand to his mouth and breathes from it; and that when they smoke they blow the first six puffs to different directions. Every man wears a little pouch which money will not unlock. Each knows words which he may not utter aloud in any finite presence. Each has goings out and comings in which none must spy upon.

And so at every turn there are hints and flashes of the unknown and the unknowable, the pettiest of which you shall try in vain to fathom. Their marvelous mythology, their infinitely complicated social, religious and political economies, their exhaustless and beautiful folk-lore,—of all you shall everywhere find clues, but nowhere knowledge. And as the rumbling farm-wagon jolts you back from your enchanted dream to the prosy wide-awake of civilization, you shall go to be forever haunted by that unearthly cliff, that weird city, and their unguessed dwellers.

JOHN BODKIN'S BABY.

By W. A. Elderkin, U. S. A.

JOHN BODKIN was a bachelor,—"an incorrigible, stingy, mean old bachelor," according to the general opinion of the "Good Samaritan" Society, which was composed mainly of unwedded ladies of uncertain age. Not that any one of them had ever desired to *marry* John Bodkin—no, indeed!—not if he were the last man on earth, which, thank Heaven, he was not! The idea of any intelligent woman with two eyes in her head, and a proper sense of self-respect, ever wishing to be the wife of such an insipid, commonplace creature, was too absurd!—and yet, somehow, it happened that whenever John Bodkin passed along on the other side of the street a constellation of eyes appeared at the windows of the Society rooms, beaming upon him curiously, as day after day he stopped in front of the widow Marvin's house to talk with Maria over the gate.

"Goodness gracious!" said one, "He's old enough to be her father!"

"Well!" exclaimed another, "I cannot see, for the life of me, what attraction he can find in that silly girl!"

"Oh!" said a third, who had once been a teacher in the high school, "*De gustibus non est disputandum!*" and she actually laughed, but it was a weak, sickly laugh, and a deep sigh followed it.

"For pity's sake!" chirped in another with faded red hair, "why *don't* he go into the house, and not do his courting over the fence?"

"I thiuk he shows excellent judgment in that respect," said Miss Sourbeigh, dryly. "If I were a man and had to court a freckled girl, like *that* one over there, the higher the fence the better!"—at which humorous remark all smiled and took another lingering look at Mrs. Marvin's front gate.

Then, one by one, the gentle cavilers turned away from the windows and resumed their needlework in silence, and the world was again permitted to roll around as usual.

John Bodkin was a healthy, prosperous man. He had commenced at the foot of the ladder, as most prosperous men do, and had worked his way up to the topmost round,—becoming one of the leading spirits of the town in financial, political and even religious matters; and now at the age of forty-five he was a bank director, a merchant, a county supervisor, and a pillar of the church.

But with all John Bodkin's attainments he had never yet attained to matrimony, nor had he ever evinced the slightest inclination in that direction until this Marvin girl came to town. If he walked home from church with a lady, it was sure to be some ancient dowager, or the minister's wife, perhaps, who was everybody's friend. If he appeared in society, which was a rare occurrence, he devoted himself entirely to the older married ladies. If he visited a church fair or "sociable," he conversed with matrons, or talked politics with men, to the utter neglect of everybody else.

So it may be easily understood that, among the marriageable ladies of the serene little town, Mr. John Bodkin had long ago been voted a misogamist of the deepest dye, a man utterly devoid of romantic feeling, impressionless and cold; and now, at this late day, after ignoring, for years, the charms of various maidens who were but little younger than himself, and who—goodness knows!—were socially, intellectually and morally good enough for any "Bodkin" that ever drew breath, to see him making up to a young upstart of a girl like Maria Marvin, hardly out of her

"teens," and as red-headed as ever Jezebel dared to be, was just a little more than flesh and blood could bear!

Mr. Bodkin had a most aggravating habit of minding his own business; and that made matters all the more exasperating to the Good Samaritans, who were waiting and watching for retribution. If he would only *say* something about somebody, or *do* something a little out of the straight path! If they could only connect his name with some dark mystery! or implicate him in some way with something horrid,—no matter what! How they would pounce upon him! and, having humbled him in the dust, how much more comfortable and resigned they would feel.

Little did they imagine that their hour of triumph was so near at hand; and little did John Bodkin dream that his fair name and reputation were soon to be in jeopardy.

Like the traditional bachelor of Mother Goose, Mr. Bodkin lived by himself. His residence was in the fashionable part of town; but it was only a plain, brick cottage after all, with a veranda and a few shade trees in front. The only inmate of Mr. Bodkin's house, besides himself, was Mrs. Smiley, a motherly, good old woman, wrinkled and gray and meek,—a pattern of neatness and thrift, whose morality and cookery were beyond reproach.

She was Mr. Bodkin's housekeeper, laundress, chambermaid, cook, waitress, "bell-boy" and scullion. She prepared and served his meals, sewed on his refractory buttons, mended and brushed his clothes, darned his socks, built his fires, blacked his boots, and kept his house in general good order; from which it may be inferred that Mr. Bodkin was a thrifty man and lived very much within his means, as thrifty men always do.

Mr. Bodkin had one very peculiar trait, however, which should be mentioned before this story proceeds further. *He hated babies*, that is, "little bits" of babies who could neither walk nor talk nor understand. After they became old enough to comprehend the difference between a hoe and a haystack, and could run and romp and shout, he could endure them; but little, sour, red, drooling, toothless babies, he could not abide; and he would no more go near one, much less *touch* it, than he would a hornet's nest.

One evening, in the blustering month of March, as Mr. Bodkin sat quietly eating his supper, the door-bell rang. Now it was a very unusual event for John Bodkin's door-bell to ring; and as Mrs. Smiley came in hastily from the kitchen she seemed very much astonished, and looked at Mr. Bodkin in a wondering sort of way and hesitated,—being in grave doubt as to what course would be most prudent in such an emergency.

"If it's any one to see *me*, Mrs. Smiley, you may ask them into the library," said Mr. Bodkin, helping himself complacently to another sausage and trying to appear very unconcerned, though, in truth, he was dying to know who could possibly be at the door on such a night.

Mrs. Smiley did not quite like the way in which Mr. Bodkin emphasized the word "*me*;" but she proceeded to obey orders, not forgetting to adjust her apron and smooth her hair a little as she went through the hall to open the door.

It was only a small boy with a note. Mrs. Smiley took the note and, after telling the urchin to come into the hall and wait for an answer, hastened to deliver it to Mr. Bodkin, who opened it and read, as follows:

WEDNESDAY EVENING.

Dear Mr. Bodkin:

Miss De Sharp is coming in to sing for us this evening. Do come down if not otherwise engaged. Quite informal, you know,—no other company. Please send verbal answer by bearer, and dont you dare to say *no*.

With kindest regards,

MRS. MARVIN.

Mr. Bodkin suddenly concluded that he had had supper enough.

"I'm going out this evening, Mrs. Smiley. You can leave the hall-light burning when you go to bed," said he, rising from the table and thrusting the note into his pocket.

Mrs. Smiley nodded a respectful acquiescence.

Then he went into the hallway and instructed the small boy to say to Mrs. Marvin, with his compliments, that he would be down in half an hour, and the boy being evidently in a hurry shot out into the darkness, closing the street door after him with a bang.

"Boys are always in a hurry," said Mr. Bodkin to himself as he turned the key. "Probably hasn't had his supper yet."

Then he went to his room to put on a clean collar and "brush up" a little; and visions of Maria came and ministered unto him as he stood before the glass tying on his best cravat.

Mrs. Smiley having cleared away the supper things extinguished the lights in the library and dining-room, and retired as usual to the kitchen to finish her work.

In a few minutes Mr. Bodkin emerged from his room neatly attired for the evening, and stepping into the hall put on his heavy overcoat and fur cap. It was a bitter cold night, and the wind was blowing a gale, so he drew his cap down about his ears, wound his muffler snugly about his neck, and got his gloves ready to draw on as he walked along. His half hour was nearly up, and he would have to hurry. Opening the front door to make his exit, a gust of wind swept into the hallway and extinguished the light, leaving him in utter darkness. But he was ready for the storm, so he pushed on out of the door and closed it firmly after him.

"Never mind the light, Mrs. Smiley will attend to that," he thought, as he drew on a glove and gathered himself for a start.

As he stepped across the veranda, cautiously feeling his way towards the steps, his ankle came in contact with something; and at the same moment he heard a low, half-smothered cry which seemed to be at his very feet. What could it be? Then stooping down and groping about in the darkness to discover the mysterious object he found an old willow-basket, and in the basket, wrapped in an old woolen shawl, there was something moving! He touched it with his bare hand; it was a little, soft, smooth, warm body.

"Why, its a *baby!*" he said to himself, shuddering at the touch. The poor little waif gave another faint pitiful cry, and he snatched his hand quickly away; then all was still again. John Bodkin staggered back in amazement.

"As I live!" he exclaimed, "some one has left a *baby* at my door!" His indignation knew no bounds. Had he followed his first impulse he might have kicked the basket, baby and all, into the middle of the street—oh, horrible! He positively *hated* himself a moment later to think that such a wicked, heartless thought could ever have entered his head. Then his sympathies began to warm towards the poor, helpless little thing; and he stood there in the bleak, cold night and pondered. What should he do?

He had half a mind to take it up in his arms and carry it right down to Mrs. Marvin. She was a sensible good woman, and could advise him what course to take in the matter. But no, that would never do; for he would most surely be met and recognized on the way, and the "young one" would of course keep up a continuous howl; and next day it would be the talk of the town that John Bodkin,—think of it! that *John Bodkin*,—a member of the church in good standing and a citizen of respectability, was seen after dark hurrying along very stealthily and mysteriously with a living baby in a basket! A pretty story that would be.

Manifestly, then, there was but one alternative. The baby must be taken care of, and *at once*. There was no time to be lost either, for it would freeze to death shortly.

His night-latch key was away down in his trousers' pocket, and he was too shivering cold to hunt for it, so he rang the door-bell vigorously. As he stood waiting he pulled on his other glove, and a very similar incident which he had read about in the newspapers a few days before came vividly to his recollection. If he could possibly prevent it the papers should never hear of this. He would caution Mrs. Smiley on this point.

Presently the old housekeeper came pattering through the dark hall to the door, and discreetly called from the inside:

"Who's there?"

"It is I, Mrs. Smiley. Open the door, please," Bodkin replied. "Oh, is it *you*, Mr. Bodkin?" asked the cautious woman as she unlocked the door. "Gracious! How you frightened me! Have you forgotten something, sir?"

"No," answered Bodkin, "but I have *found* something here on the porch, and I don't know what to make of it."

He picked up the basket and held it towards her at arm's length. "Here it is," said he, "carry it into the kitchen, Mrs. Smiley, and take care of it."

"What on earth!" exclaimed the astonished housekeeper, as she took the basket in her hands. "Why, what *is* it, Mr. Bodkin?"

"You'll soon see what it is! Do whatever you please with it, Mrs. Smiley. You know best. Only keep it out of my sight. Ugh! I wouldn't touch it again for a farm! Oh! and, Mrs. Smiley, be very careful not to speak of it to any one,—not to *any* one, Mrs. Smiley."

"No, sir. I'll not mention it," she replied, half frightened at the mystery, as she disappeared with the basket and closed the door.

Mr. Bodkin was completely bewildered. He made his way almost mechanically along the dark street, looking neither to the right nor to the left, and scarcely heeding the fierce wind that swept and whistled by him. His thoughts were of *babies*, and of the delicate responsibility which had been so suddenly and unexpectedly thrust upon him.

He reflected upon his own utter incompetence as a raiser and trainer of infants, and felt thankful that he had good Mrs. Smiley to depend upon. Her experience and kind motherly disposition would be invaluable. He wondered whether it was a boy or a girl baby. If it was a boy he would give him a college education and make a lawyer, or perhaps a minister, of him. If it should prove to be a girl!—Well, he devoutly hoped it might not; but, no matter, he would do his Christian duty in any event, though he felt morally satisfied that a girl baby would be much harder to "raise" than a boy baby. And so as he walked along his thoughts flew in and out like swallows in a chimney-top.

At last he reached Mrs. Marvin's door, and was cordially received by that excellent lady. Maria welcomed him warmly too, and so did Miss De Sharp, who had already arrived.

Then, after a while, the promised entertainment began. Miss De Sharp sang her sweetest songs in her sweetest way, and Maria sang,—and Miss De Sharp played, and Maria played,—and the programme continued almost incessantly for a solid hour.

But the delightful harmony was all lost on Mr. Bodkin, who was away off in the clouds wool-gathering,—John Bodkin and his baby.

"What can be the matter, I wonder?" thought Mrs. Marvin, observing his abstraction. "I never saw him so quiet and moody before;" and for the sake of a change she proposed a game of chess.

Mr. Bodkin was perfectly willing, and the battle commenced, while the young ladies proceeded to try over some new songs at the piano.

But the white pawns were all white babies, and the red pawns were red

babies, and John Bodkin was checkmated on the seventh move! Another game with similar results, and a third game without improvement!

Why did those horrid girls persist in singing "cradle-songs," and "lullabies," and silly ballads about "Papa's baby boy," and "The shoes that baby wore," and all that sort of thing? It began to look as though they meant to be personal. At any rate Mr. Bodkin was very much flustered, and to his great relief the chessboard was laid aside.

Then Maria got out her basket of fancy work, to show her guests the numerous pretty things she had been making for the church fair. There were babies' hoods, and babies' caps, and babies' mittens, and tiny little stockings, and all sorts of baby things in pink and yellow and pale blue and soft creamy white.

Mr. Bodkin did not claim to be a judge of such things, but he admired them very much, all the same; and he secretly resolved to let Mrs. Smiley go to the fair and buy a lot of these "traps" for the baby.

And so the evening dragged along; but, with all the efforts put forth to make his visit pleasant, John Bodkin was not happy.

"Oh, Mr. Bodkin!" said the widow, brightening up as with a new and original idea, "I wish I had sent for you to dine with us to-day!"

Mr. Bodkin looked vacantly at the toe of his boot and tried to smile.

"We had a lovely dinner," the widow continued; "and to cap the climax our new cook surprised us with a real old-fashioned dessert,—a "baby-in-the-blanket" with wine sauce. I'm sure you would have enjoyed it."

Bodkin looked at her in a queer, incredulous way and said yes, he was fond of anything of that kind; but away down in his heart he wondered if cannibalism was becoming fashionable. He had never before heard of civilized people *eating* them, even with wine sauce.

Before the evening was over, however, the pressure became stronger than he could bear; and watching for a favorable opportunity he told the widow briefly and in a whisper all that had happened. It was such a relief to unload the burdensome secret!

Mrs. Marvin listened attentively to the strange story and smiled. Whether it was a smile of pity or of contempt, John Bodkin could not quite make out. In vain he waited for some word of friendly advice; but she offered no comfort, no counsel, no comment, *nothing*, and hastily changed the subject.

Thank heaven, the evening was drawing to a close! for he was suffocating in that atmosphere of indifference.

"Confound it!" thought he, as he walked home, "I wish I had said nothing about it! I shall never have courage to enter Maria's house again."

Mr. Bodkin's rest that night was broken and unsatisfactory. He thought and dreamed of *babies* in every shape and form and color; and the next morning when he made his appearance at the breakfast table he was hollow-eyed, pale and nerveless.

"You are not well this morning, Mr. Bodkin," said Mrs. Smiley kindly.

"No," he answered languidly. "I did not sleep well, Mrs. Smiley, for thinking of that basket. I never had anything worry me so before."

"Oh, indeed, sir, you needn't worry about it at all! The little thing is as bright and well as possible, sir!"

"Did it eat anything?" asked Bodkin.

"Oh, yes, sir; I gave it a good supper of fresh, warm milk, and then it went to sleep and never whimpered all night."

"What kind of a looking thing is it?" inquired Bodkin.

"It's really very pretty, sir,—indeed it is,—and seems quite healthy, too, sir. It's a wonder to me, sir, that anyone should wish to part with it," said the kind old soul.

"Ah, my good woman," remarked Mr. Bodkin, "there are very unfeeling

people in this world. Is it dark or light, Mrs. Smiley?"

"Oh, it's quite dark I should say, sir,—it's hair is almost black, and very curly, and it has beautiful dark blue eyes, and such pretty white feet! Don't you want to see it, sir?"

"*No!*" shouted Bodkin, rising from the table; and stalking out of the house he hastened down the street to his office.

"Well, I declare!" said Mrs. Smiley, as she rubbed her withered hands together and looked after him, "I wonder what has gone wrong? I never saw Mr. Bodkin so cross before," and she went about her work in a very uncomfortable frame of mind.

Before noon that day it was whispered about town that a baby had been left on Mr. Bodkin's doorstep. Where the report originated no one seemed to know. Mr. Bodkin had told Mrs. Marvin about it to be sure; and Mrs. Marvin had told it to Miss De Sharp "in strictest confidence;" and Miss De Sharp remembered to have mentioned it to a very particular friend, who had promised "on her sacred word of honor" never to repeat it; and yet, in spite of all this precaution, the story with all its details had leaked out.

People stopped on the corners to talk about it, and looked askance at Bodkin as they passed his office door. The little town had not for years experienced such a real sensation; and things did not look at all well for a certain Mr. John Bodkin.

The members of the Good Samaritan Society were in ecstasy! *Nemesis* had come at last, and they heard with exaltation the flapping of her wings.

In the excitement of the hour the church "committee on charities" was hurriedly called together, and in a body waited upon the unhappy man at his office, to hear what he might have to say concerning the matter.

Mr. Bodkin had no explanation to offer. He related the facts in the case, so far as he was able, giving an exact account of what had transpired during the previous evening. His theory was that the infant probably belonged to some one who, through extreme poverty, had been compelled to abandon it. But he was perfectly willing to keep the child and care for it until its parents could be found. The committee whispered and "hemmed and hawed," as if not entirely in accord with Mr. Bodkin's view of the case, and finally adjourned in evident perplexity to the minister's study for further consultation as to what should be done.

After a preliminary caucus in each corner of the room, the "meeting" was called to order, the minister in the chair, and proceeded to business. Dispensing with the usual formalities, the matter in question was at once brought under consideration. It was plainly a case of *emergency*, and whatever the committee decided to do should be done at once. Every one agreed to that.

To cut matters short, and save, perhaps, some discussion, the minister had a plan to propose which, he thought, would meet the approval of the committee. He had talked it over with his wife, and she had expressed a willingness to take charge of the unfortunate little waif, administering to its temporal and spiritual necessities, for a while at least, if the unavoidable expenses for medicines, clothing, etc., could be paid from the "church fund." Nothing would be charged for the infant's board.

Mr. Pennywise said that he did not see how the "church fund" could be used for such a purpose: he had never heard of it being done. He fully appreciated the minister's excellent motive in making the proposition, but he believed it would be establishing a very dangerous precedent, and he was most decidedly opposed to any such arrangement. He thought the child should be sent to the county almshouse. The burden and expense should be borne by the *county*, and not saddled on the church.

Mr. Farthing, who was one of the almshouse commissioners, said that

the institution which he had the honor to represent was maintained by the taxpayers for the poor of the county only: the law was very clear on that point. In this case there was no proof that the child belonged to, or had even been born in, the county. It might have been brought from some other county. The committee would see at once that the county almshouse was not an asylum for the abandoned infants of the State at large. He thought the "Orphans' Home" would be the proper place.

Mr. Upperjaw, who happened to be one of the Board of Trustees of the Orphans' Home, said that, in the first place, there was nothing to show that this infant was an *orphan:* its parents might be alive and well. In the second place, even supposing it to be an orphan, it could not be admitted to the "Home," under the rules of that establishment, without proper identification and a certificate from some responsible person as to the good character of its deceased parents. He thought in the present case it would be exceedingly difficult to procure the requisite "papers." Babies left on people's doorsteps *after dark* are not usually, as a rule, accompanied by written credentials — (laughter). It seemed to him that the Good Samaritan Society might be induced to take charge of the child.

Miss Sourbeigh, who was in fact the vice-president of the Good Samaritan Society, rose to her feet, blushed becomingly, and said that she and her associates in the cause of benevolence had given this matter some consideration already, in an informal way. It was certainly *not* a case within the Society's jurisdiction, and she was satisfied that there was not a single member of the Society who would touch the "young one" with a ten-foot pole! She wished it understood that the Good Samaritan Society was not organized for the purpose of washing and dressing babies! In her opinion, neither the church, nor the county, nor any charitable institution had anything to do with this matter. Let the *law* determine who should take care of this abandoned babe! She did not care to mention any names, nor to give expression to her own individual opinions, but she was in favor of placing the case in the hands of the *grand jury* for immediate and searching investigation!

Mr. Briefly, who was a lawyer and a pillar of the church, said that the "law," just referred to, was powerless in any case without *evidence*. He was not positive in his own mind that there was a baby in the case at all; he had not seen it. Was there any one present who had *seen* this baby? For a moment there was no reply; then some one ventured to suggest that there was no reason for doubting Mr. Bodkin's own statement to the visiting committee. Mr. Bodkin had plainly said that he found a baby in a basket on his doorstep.

"Did Mr. Bodkin describe the child?" asked the lawyer.

"No," replied Mr. Upperjaw, "I don't remember that he did. I presume the committee did not think it necessary to go into such minute details."

"Of *course* not," said Mrs. Sourbeigh testily. "I suppose a baby is a baby whether its eyes are black or brown or blue or green! or whether it is cross-eyed, wall-eyed, pop-eyed or blind! or whether its toes turn out or its toes turn *in*, Mr. Briefly! I do not understand that we are here to discuss the complexion, shape, size or physical features of the 'young one,' but merely to decide what to *do* with it!" and she sat down very red and very much excited, and patted the floor with her foot.

"What authority have we to do *anything* with it?" asked Mr. Briefly with an aggravating smile. "Has Mr. Bodkin requested this committee to act in the matter?"

No one heard him, apparently.

"I ask if Mr. Bodkin has requested any action on the part of this committee?" he repeated in a louder voice.

Still no answer.

"If he has *not*," the lawyer continued, "it is none of this committee's business! and I for one decline to have anything further to do with it!" and Mr. Briefly took his hat and his cotton umbrella and left the room.

Those who remained were heartily glad to see him go. Now that he was out of the way there would be no more quibbling and hair-splitting: the discussion could go on harmoniously.

And it did go on until the entire afternoon was wasted without reaching a conclusion. What to do with that baby the committee could not decide. The tiny pariah had become an elephant on their hands, and a motion to adjourn until the next morning was carried unanimously.

* * * * * *

That same evening as John Bodkin walked demurely up to his supper Maria Marvin came out to the gate in front of her mother's house to meet him. Had she looked into the windows across the street she would have seen six or eight sharp eyes watching her; and had there been a telephone connection from the Society rooms to her little pink ears they would have turned from pink to crimson at the things that were being said.

"Good evening, Mr. Bodkin," she said gaily. "How is that little stranger up at your house that I hear so much about?"

John Bodkin turned scarlet.

"Ah, Miss Marvin," he stammered, "I—I am so sorry for that poor baby."

"Oh, *I* am not sorry at all," said Maria. "Indeed I think it was very lucky to fall into such good hands. But, tell me, Mr. Bodkin, is the little thing pretty or plain? Tell me all about it."

"Why yes—of course. I—well, to tell the truth Miss Marvin, I haven't seen it yet! I—"

"Haven't *seen* it!" exclaimed Maria in surprise.

"No, Miss Mar—that is, Miss Marvin, I actually haven't seen it. Mrs. Smiley took charge of it, you see, and—"

"Come closer to the gate, Mr. Bodkin," said Maria, interrupting him, "I want to tell you something."

Mr. Bodkin obeyed. He would have stood on his head if Maria Marvin had commanded him.

"Do you know," she continued in a lower voice, "that all the gossips in town are puzzling their heads about that baby?"

John Bodkin turned from red to white, and wished the earth would open and swallow him, but he made no reply.

"Now, *I* happen to know something of the circumstances, Mr. Bodkin."

"*You*, Miss — Miss Marvin?" exclaimed the astonished man.

"Yes,— *I!*— I know the *mother* of the dear little thing, and a good, kind mother she is, and belongs to an excellent family, and glad enough she would be to have her baby back again, poor thing! Mr. Bodkin, that baby was *stolen* from her,—cruelly stolen from her, and placed on your doorstep! The person who did it has confessed all to me."

In all John Bodkin's life he had never been more surprised; and he stood looking into Maria's eyes, petrified and speechless.

"Now, Mr. Bodkin, I have been thinking over the matter," continued Maria, "and I want you to invite me, with such friends as I may choose to ask, to come up to your house this very evening *to see the baby*. It will satisfy their curiosity, you know, and perhaps their hearts will soften towards *you* when they see with their own eyes the helpless innocent little creature that you rescued from death."

"But — Miss Marvin! — I don't understand —"

"Never mind," said Maria, interrupting him, "I will tell you all about it another time. Now, do you consent to my plan? Shall I consider myself and friends *invited*, Mr. Bodkin?"

"Why, *certainly*, Miss Marvin, since you think it best; but I confess I am

not sanguine about the results," answered Mr. Bodkin; and after a little further conversation, which need not be repeated here, he continued on his way up the street.

When John Bodkin had finished his supper that evening he told Mrs. Smiley of the promised call.

"Very well, sir," said the good woman, "I'll take great pleasure in showing it, I'm sure. Wouldn't you like to take just one look at the dear little thing, sir? It's so smart and pretty!" "*No*,—NO!" thundered Bodkin in a most unnatural way, "I tell you I want nothing to do with it! It has made trouble enough for me, Heaven knows, in the last twenty-four hours;" and then he went off to his room as cross as a bear, and locked himself in.

Mrs. Smiley, dear old soul, could not understand it at all. Surely Mr. Bodkin could not blame *her* for what had happened, and yet he spoke so harshly and so unkindly. What could it all mean?

An hour later the door-bell rang, and Miss Marvin was shown into the library with a quartette of the very worst gossips in town. For months these four busybodies had been "dying" to see the inside of that mysterious house, and their sharp eyes took in everything from floor to ceiling.

"Mrs. Smiley, we have come up here, by Mr. Bodkin's invitation, to see the poor little outcast that was found at your door last night," said Maria. "May we see it?"

"Why *of course*, Miss," answered Mrs. Smiley. "Mr. Bodkin told me that some of his lady friends would be in to see the little fellow, so I washed his face and brushed his hair to see the company."

"Ah!" whispered Miss Wigglelip aside, "it's a *boy* then!"

"Just wait a moment," continued Mrs. Smiley, bustling about and placing chairs for the callers. "Be seated, ladies, and I'll bring the little dear to you right away."

The amiable old housekeeper hurried at once to the kitchen, and in a few moments returned with the basket, which she placed upon a table in the center of the room.

As if by common consent the visitors at once left their chairs and gathered closely around it mute with excitement and curiosity.

Pharaoh's daughter and her companions, splashing barefooted among the bulrushes of the Nile, could not have felt a more eager interest in the unopened cradle of the infant Moses!

The folds of the old shawl were thrown back, and there, fast asleep in the bottom of the basket, was *a little Newfoundland puppy!* which, as it turned out, had been sent to Mr. Bodkin by Mrs. Marvin simply as an anonymous present, and left on his doorstep by the mysterious boy who delivered her note on the previous evening.

The effect of this startling disclosure may be imagined. The "sensation," which had shaken society to its very foundation, was practically at an end, and the voluble gossipers of the village were aghast. Maria is Mrs. Bodkin now, and the "Good Samaritan" Society has moved into another street.

THE OLIVE IN CALIFORNIA.

By Ellwood Cooper.

ROM the time of the occupation of the coast of California by the Franciscan Fathers and the founding of the Mission churches, from San Diego to San Francisco, until 1865, little progress was made in fruit culture. From San Luis Obispo to the southern boundary of the State a goodly number of olive trees were planted at every Mission. These trees were cared for and the fruit harvested, being mostly made into oil, which was used in the religious services of the church. It also entered as a food product into every-day use. The reasons why this industry, destined, in my opinion, to be the leading one of California, did not attract the attention of the intelligent settler does not come within the scope of this article. Suffice it to say that the wisdom of these early Fathers, and the example set by them, almost appears as a providential dispensation, and claims our gratitude.

In the spring of 1868 an interesting article was published giving an account of the Missions, with special reference to the olive, and the importance of its culture; and about that time several orchards were set out in the southern counties.

Early in April of the above-mentioned year I visited Santa Barbara and saw the Mission olive orchard, which was, even as late as April, hanging full of fruit; and I was so impressed by its beauty and apparent productiveness that two years later, when I decided to make California my future home, I began at once to prepare for olive-growing. The result of that determination is well known throughout the State and, in fact, throughout the country. In the development of an industry entirely new to me I had, of course, much to learn. Much labor and study was requisite, which I entered into with an enthusiasm that knew no bounds. I procured all the books on the subject that could be had in the different languages, and had those translated which I could not master. In the study my interest increased, so that in the progress of my knowledge of the subject, its importance was more and more manifest, and now the impressions received are more strongly marked than ever before. The dawning of the day is at hand, and I expect to see the realization of my hopes. I believe the time will come when all the table-lands, hills and mountain slopes will be planted with the olive. Many other fruits will be rooted out to give it place. Every available acre will be required for this industry, and no substance will enter more large into medicinal preparations than olive oil, and none be more common as a food product in daily consumption.

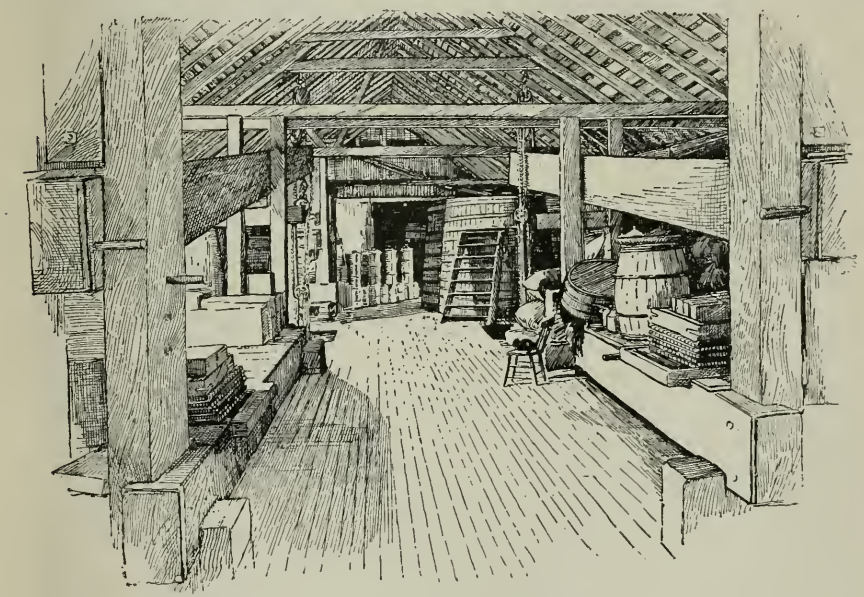
Olive-tree planting is inexpensive because trees can be raised from slips and cuttings, which grow readily if properly manipulated. If grown from cuttings the plants will produce fruit the fourth year. Trees can also be grown from seeds, a plan in general encouraged, on the ground that better trees are produced. By this method, however, it takes probably twice as long to get the first fruits, with the additional expense of either budding or grafting. I have a young orchard four years old, from cuttings, planted in permanent sites, uniformly good trees and well fruited. Such results can only be expected where the best of care and cultivation is given. It is not necessary to dwell upon this point, since the greatest economy in

The Olive Works at Ellwood.

all cases is in the greatest care and best cultivation.

The olive, as far as I have experienced, seems to thrive on every kind of soil where well drained. On my ranch the trees have been planted in black adobe, on sandy loam, subsoil brick clay, on deep bottom land, on sandy and stony hillsides, on adobe hillsides, on clay soil, and on red lands. All are thriving, the higher up apparently the more thrifty; the highest elevation, however, is not over four hundred feet above the sea-level, summer heat was greater than at Ellwood; but as to the relative value per tree for oil-making I have no experience.

In universal olive culture as outlined in this article a great number of horses and mules will be required. These can be pastured amongst the orchards, in ravines, on slopes where it would be too difficult to get the fruit, and on the orchard margins, without injury to the trees; hence neighborhoods engaged in the culture would be saved the expense of fencing.



Interior of the Oil Works.

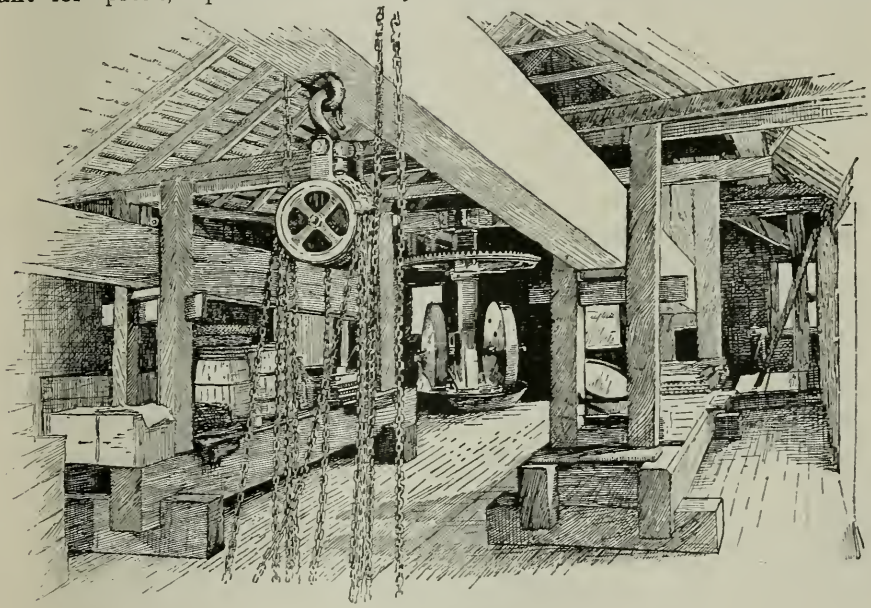
and is distant from the sea less than three miles. The tree will grow in a dry climate where no other fruits could be successful, and will live through an extremely dry year; but it could not be expected to give much fruit such years, nor is it known just how long thereafter the tree would take to overcome the want of moisture. The effect of irrigation on olive trees does not come within my experience, as here we have never irrigated. I have noticed that the berries I have purchased were larger in size with irrigation when grown inland where the I have been assured by neighboring olive-growers that they allow their horses to roam in fields adjoining unfenced orchards, and that in no case have the trees been injured. This absence of fences would be a large margin of profit as compared with other fruits.

The climatic conditions necessary for successful olive-growing in California have not been fully determined. It is believed that the tree will thrive and produce fruit in nearly every part of the State. In localities where the thermometer, Fahrenheit, would fall below

Olive Orchard at Ellwood.

twenty degrees, or in regions where the heat is very great and continuous during the summer season, it would be well to experiment before extensive planting. I have read that in the tropics the olive will not bear fruit. On the coast it is claimed that the tree will grow more rapidly and bear more abundantly; and, while this is conceded, those inland claim an equal advantage in less trouble from insect pests and fungoid diseases.

Regarding the variety of olive to plant for profit, opinions are very much at variance. Formerly the Mission was the only variety planted. Some claim that there were several Mission varieties, while others that all came from the same original stock first brought here by the Mission Fathers, and that while there are different types it is the result of climatic conditions or location. I am inclined to this latter opinion because there is an apparent difference in the size and shape of the fruits in different locations, while all of them reproduced in the same orchard show no difference. The cuttings I planted were from the Missions of Santa Barbara, San Fernando and San Diego, and from the Tajiguas ranch. In recent years many different varieties have been brought from Europe and are on sale at the different nurseries under various names. I have no controversy with these parties who claim superiority of special-named varieties; but, until they are proven by experience to produce more fruit or better fruit or better oil, and better pickles, I shall plant only the Mission variety. There is too much confusion and uncertainty, since different authors have different names for the same variety. New varieties have been planted and are fruiting, so that the question of their relative values will soon be determined by the experience of olive-growers in California. Many things are to be considered in selecting varieties. A rapid growing tree easily shaped is a very important feature, as it gives good bearing capacity. Some varieties grow unshapely and are with difficulty kept from breaking. Different locations may require different varieties, but above all other considerations is the quality of



The Olive Press.

Old Olive Trees at the Santa Barbara Mission.

oil produced. The varieties that will make the best oil should in all cases be selected, provided the quantity is a fair average to a given acreage planted. This rule will be applicable as well for pickling, unless the fruit is too small for economic handling. The quantity and quality of the oil contained in the fruit gives the value to the pickles.

Making olive oil is a simple process; still it is necessary that the maker should know how. The quality will depend on the care exercised from the picking of the fruit through every different stage of the manufacture until it is tightly corked in the bottle. The berries must not be allowed to stand in heaps, or in sacks, or, in fact, in any sort of package long enough to heat; otherwise the oil will become musty or rancid. Absolute cleanliness should be practiced in every branch of the manufacture.

The greatest drawback to the successful cultivation of the olive is the black scale. This insect is so persistent and so difficult to destroy that it will discourage the grower unless he determines to fight it to such an extent that it will not materially injure the crop. Those living in the hot interior have claimed that the black scale could not live where there were no summer fogs. In fact this was the general belief, but experience has proven the contrary, as orchards in such localities have been destroyed and rooted out on account of the ravages of this insect. With regard to this drawback to the olive industry, it is confidently hoped that in the near future a parasitic insect will be discovered and brought to California which will destroy the black scale as effectually as the Vedalia Cardinalis (Australian Lady-bird) has the Icerya Purchasii (white scale). Such a discovery would decrease, very greatly, the cost of production.

The quantity of fruit that a well-grown olive tree, from twelve to fifteen years old, will produce in a good year, is from two hundred to two hundred and fifty pounds. Such results were not uncommon in my neighborhood the past year. The best results in the oil product the same year, as weighed from the trees, was eight and a half pounds of berries to the large bottle of oil. These olives were of the Mission variety, and the year an extraordinarily fruitful one.

In this brief account I cannot enter into all the details of the olive industry. I must therefore refer those who anticipate planting to the compilations of the State Board of Horticulture from 1885 down to the present time. These books are accessible in all the libraries of the State. If I can encourage planting by urging upon the people the importance of this industry, I will be amply repaid for this article. It is not that we should plant merely for the purpose of money getting, or of increasing the prosperity of the community or State; there is more involved. It is to be hoped that the saying, "History repeats itself," will prove true in the present instance, and the uses of this valuable product will be as well known as it was thousands of years ago. The substitution of noxious mixtures, introduced and falsely represented to the consumer, has well-nigh destroyed the true character of the pure product. Let us encourage the production of a substance of such economic value and so highly nutritious.

Plant olive trees.

CLIMATES OF SOUTHERN CALIFORNIA.

By P. C. Remondino, M. D.

SOUTHERN Californians are justly proud of their matchless climate. It certainly has not its analogue in any other of the favored spots of the earth. Other climes may have seas of lighter hues or skies of deeper blue, brisker breezes and more natural vegetation close to the seashore; they have even seasons of enchanting weather, but they also have many drawbacks which to the California climate are unknown. The shores of the Riviera, bathed in the sunshine of a clear Italian sky, with the blue Mediterranean lazily undulating at the foot of the wooded Appenines, really makes an enchanting picture. The lazy, warm breezes entice the invalid or tourist into the open air to feast on the varied landscape and balmy atmosphere. A gust of cold air comes down some mountain glen, followed by avalanches of still colder air from the snowy crests to the north. Clouds gather on the horizon; and soon the sea is lashed into a fury. Now the sky is overcast; and cold, piercing winds sweep down from every height. The promenaders, loiterers, some in carriages and some on foot, are hurriedly breaking for some shelter. Where, one hour before, all was sunshine and summer breezes, is now clouds and Siberian blasts. Such are some of the accidental changes in the weather of the Riviera, strongly pronounced at Genoa, unpleasantly frequent at Nice, and too often seen at Mentone.

The shores of Southern California are not marred by any like accidents. The climatic factors have no such a discordant element as the Mediterranean Tramontano to disturb the meteorological symphony that composes the climate of the California of the South; nor have they the scorching sirocco at the other extreme in the gamut played by the temperature of inconsistent old Æolus. Old Boreas is here unknown, and his opposite of Plutonic blasts is equally a stranger. That talented and lamented authoress, Helen Hunt Jackson, has well and fitly remarked that Southern California was like an island on land. No better expression could have conveyed an idea of the truly insular character of its climate.

The true ocean climate is said only to be experienced on shipboard, at such a distance from land that no land influences can be experienced. Ships on the Atlantic must indeed sail at a great distance from land to effectually escape the influences of the African coast; and in the North Atlantic it is a hard matter to escape the storms that originate on the Gulf stream. Even when not stormy, the North Atlantic winds are raw, cold and moist. Farther south the heat of the tropics does not allow of any pleasant illusions in regard to ocean climates, unless it be in the return stream that flows from off the African coast towards the Gulf of Mexico, where the somewhat colder waters temper the rays of the tropical sun. So that outside of the calm Pacific I should hardly look for the ideal oceanic climate.

Probably the nearest approach to the Southern California climate to be found on the globe is that of Orotava in the Azores, where the insular climate in its extreme purity combined with agreeableness is to be met. Orotava, however, lacks the more health-conducive, bracing breezes and tonic cooler air of the Southern Californian coasts; and while it has an agreeable and enchanting climate its heat is of too moist and enervating a character to be long agreeable; for, while the Southern California climate wears well and long, the same cannot be said of the climatic queen of the Azores.

Madeira has often been compared to Santa Barbara, Santa Monica, San Diego or Coronado Beach; but beyond the resemblance in the annual mean temperatures there can be no comparison; while the temporary physical sensations imparted by the Madeira climate may again institute ideas of comparisons, the actual physical effects on living or even dead organic matter will soon show that a wide climatic difference exists.

In Madeira leather articles, books and like articles become quickly moldy, musical instruments can hardly be kept in tune, deliquescent powders liquify, and botanical specimens can only be preserved with the greatest difficulty. Iron, guns and surgical instruments require the greatest care to prevent their utter destruction from rust; while in Southern California leather articles, books, etc., do not mold, musical instruments keep well, guns and surgical instruments do not require more or as much care as they do in the Mississippi Valley; and it is doubtful if there exists a land where specimens of natural history—be they animal or vegetable—keep or preserve as easy and well. I have seen dripping sea mosses from the marine caves at La Golla simply placed between two sheets of blotting paper become perfect specimens; the same may be said of the many and varied rich ferns with which the hillsides and interior valleys abound; the grasses, flowers, and in fact all botanical specimens, require but little care to preserve. I have seen herders kill a coyote and prop it up on two sticks as a warning to other marauding coyotes. It has become perfectly mummified in a few days,—even retaining its hair. Along the shores the fisherman dries his fish on huge racks; and meats are cured by being hung in huge festoons on clothes-lines, this meat-curing being done on the seashores, arid plains or in the mountains with equal ease and carelessness. The raisins are here all sun-dried, and when a rancher kills a beef in the interior he simply hangs up the quarters with a rope and pulley to one of the neighboring live-oaks and cuts off the pieces for daily consumption as they may be required.

These desiccating and curing and aseptic properties of our seacoast air are something which can really be said to be unique, as neither Orotava, Madeira, or any of the famed resorts of Italy, France, Spain or England can boast of a like beneficent and tissue-preservative climate. A climate that will do as much for the preservation and protection of dead matter can be safely relied upon for doing all that it is possible to do in the case of living tissues. No climate endows the living organism with as much resistance, while at the same time it exacts so little in return, as that of Southern California. Here the weakly, the frail, the warped, the victim of overwork, malaria, or of former wasting diseases elsewhere, may be said to have an equal chance in the race for a long life with the broad chested and the strong limbed.

Not only does the climate impart a greater resistance, life tenacity, more wear and elasticity to the animal tissues, but the same elements that accomplish all this also carry with them such germicidal effects that diseases do not seem able to gain a foothold; hence cholera infantum, intestinal diseases of the young, middle-lived or aged, pulmonary affections and summer or fall fever, do not thrive or do they appear even, except in cases of the grossest neglect or defiance of all hygienic laws; in fact the utter absence of all seasonal diseases as well as the freedom from any endemic disease is something most remarkable and extraordinary. In the bright sunshine, steady breezes from off a wide ocean, highly electrical and ozonized atmosphere of Southern California, neither the bacillus of phthisis, typhoid fever, nor any other disease germ, can long survive in the face of these antagonistic and ever-present elements destructive to bacillary existence. The elsewhere confident and triumphant, marauding and murderous

bacillus here finds its Marathon; and the poor victim and prey to its ravages can, on reaching Southern California, snap his fingers at that evil spirit of modern diseases; for he has here reached a sanctuary, which like unto the threshold of the ancient medieval sanctuary no pursuing enemy might cross. The festive microbe, the insinuating, wily bacillus and the ubiquitous disease germ find in the chemical constituents of the Californian atmosphere a limit to their empire and existence.

The pursuit of happiness and the enjoyment of life should be our undoubted objects and aims. A lack of Abercrombian philosophy and of a proper appreciation of the sentiments evolved by Locke, Adam Smith, Montaigne, Cervantes and other philosophical minds, as well as the lack of that stoical philosophy of the ancient Greeks and Romans that induced Sir John Lubbock to exclaim that he found more right-down Christianity in the writings of many of the old pagan authors than he did in most of our modern theology, and the perverted and pharisaical cultivation of the Christian principle of modern times, have all been factors that have sent too many of us in the path of the misguided children of Israel, when in the wilderness they fell from the path of rationalism and worshiped the golden calf. In too many of our pursuits after the god who is represented with wings, and whose daughter is the emblem of fickleness and uncertainty, we neglect, until too late, the well-known fact that health can purchase wealth; and that at least, if not always able to procure us wealth, it never fails to bring us that which wealth cannot always command,—physical comfort and mental enjoyment. Like the Old Man of the Sea in the "Arabian Nights," we had shouldered a greed for wealth, and we are now like poor Sindbad, his helpless slave. Like a horrible nightmare it chains us in unhealthy offices or localities. It makes us dyspeptic, tuberculous, or the victim of Bright's disease, diabetes, rheumatism or scrofula; and although we see these monsters crawling nearer and nearer, taking possession of our vital organs and blood, we seem to be unable to break the fetters. We toil in varying and deadly atmospheres, in dingy basements, unventilated and musty offices, or in unhealthy pursuits, surely going quicker and quicker to our death; while health, comfort, freedom from care, a Christian disposition and a diet of milk and honey, accompanied by all that is of the best of the fruits of the earth, await for a claimant in the broad and fertile acres—bathed in sunshine and fanned by balmy breezes—in the wide expanse of Southern California, a region where the necessaries of life can be purchased at a minimum cost, and where the actual physiological requirements for food are found in the greatest variety and abundance as well as at all seasons, and where man is effectually emancipated from that perpetual struggle so forcibly noticeable in the East,—that of trying to keep warm for one half of the year, and in vainly endeavoring to keep cool during the remainder,—attempts attended with considerable expense and trial of temper as well as fearful wear and tear of the constitution.

Climates have two properties that should be of interest to man, these being the property of being agreeable and the one of inducing health. These two conditions or attributes of climate are not always found in unison: the first of these may be present, but as deceptive in regard to the latter result as the shade of the Upas tree, or as to the anticipated bliss in the caresses of the sirens. The agreeableness of a climate is but too often as alluring, deceptive and fatal as were the blandishments of a Cleopatra or of a Delilah. Climate controls the question of ventilation and diet, of dress and of occupation; these again control the questions of temper, disposition, health and disease. The range and reach is wonderfully great as well as powerful; so that what a

man wishes to be mentally, physically and morally may be said in a great measure to be in his own hands and directed or modified by climate. Besides his duty to himself there is a progeny that man should not neglect. Children should not be allowed to grow where their bodies, minds or morals are apt to become warped; they should be where the climatic conditions favor all of these conditions of our existence to thrive to perfection. What the population of Southern California is to-day should not be taken as a criterion of what the climate can accomplish; it may take a generation or more to straighten out the shrunken liver in the one or to condense that of another and bring back a demoralized and lax spleen to a sense of its backsliding after a sojourn in the Edens of Indiana or Kansas; it may take a generation to eradicate the rheumatic or gouty blood bred in localities where the extreme cold drives one into too gross feeding and ill-ventilated apartments; but in the end the Southern California climate can be trusted for successful attempts to accommodate the economy so that it will meander along on a half remaining kidney or an excuse for a relic of a former lung. After a prolonged sojourn in this climate, indurated, condensed, enlarged, inactive livers are reduced to at least a part of their original healthy functions, and what cannot be replaced the system seems to get along without. Leathery spleens and bowels denuded in part of their mucous lining so that elsewhere they have lost their physiological functions seem to regain their vitality, and like an old pair of pants that have gone through the dyer and cleaner's hands may yet be able to do duty at a Presidential reception banquet or at an aldermanic feast. So that for young or old, the well or the ailing, there is no climate that for the whole year, under all circumstances and all conditions, can equal that of Southern California in its physical, mental or moral relations to mankind.

The great factors of this unique, agreeable and healthy climate are the peculiarly cool ocean currents of the Pacific, the Japan Current, which although more immediately effective on the more northerly coast is nevertheless the factor of our winter rains, as without the cyclonic generations of this stream Southern California would be an arid and rainless region. The run of the latitude, the deserts of the Mojave and of the Colorado, and the peculiar physical conformation of its mountain chains, whose crests, like to the outer wall of the Roman coliseum, form by their hills and valleys an enormous amphitheater with Los Angeles and San Diego for the arena. As this amphitheater is only exposed to the southwest, and its outer ramparts are sufficiently high to prevent any ingress of the heated desert air, it naturally follows that the locality enjoys a perfect marine or insular climate, as observed in the beginning of this paper. The dryness of its soil—due to the lack of summer rains and to the great natural heat of the soil—favors the high electrical condition of the air resulting from the friction of different temperatured and conditioned currents of air. The highly organized atmosphere and its extreme oceanic or insular equability, its regular trade winds and sea breezes,—remarkably constant as to temperature and velocity,—clear sky and bright sunshine, are all elements that conspire to make of Southern California a terrestrial paradise.

AMONG THE HIGHBINDERS.

AN ACCOUNT OF CHINESE SECRET SOCIETIES.

By Frederic J. Masters, D. D.

HIGHBINDERS is a name given to certain Chinese secret societies in California that profess to be benevolent institutions, but are in reality bands of conspirators, assassins and blackmailers. The term "highbinder" first made its appearance in the columns of *The Weekly Inspector* for December 27, 1806, describing the riotous behavior of a party of Irish banditti belonging to an association called "Highbinders," on Christmas eve of that year. Secret societies are known amongst the Chinese by the colloquial term "hatchet societies," the members of which are called "hatchet boys,"—very significant terms, which aptly describe their murderous and destructive operations.

The founders of Chinese highbinderism were political refugees who, having made futile attempts to overthrow the present reigning dynasty in China, were obliged to flee to save their necks. The parent root of these numerous secret associations is known in China as the Triad Society, so called because the three powers, Heaven, Earth and Man, are held by its members in mystic veneration. Their revolutionary plots were formed with such inscrutable secrecy, and under such artful disguises, that all the vigilance of the Chinese government, and the ablest detective service perhaps in the world, failed to discover the conspirators until the Tai Ping rebellion broke out, which shook the empire to its foundations and devastated ten provinces with fire and sword.

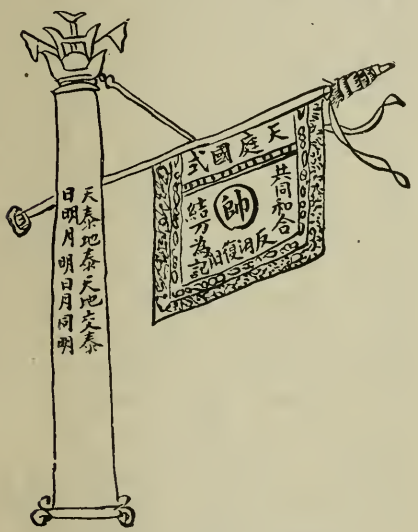
The suppression of the revolt by General Gordon and his Chinese soldiers,—called "The Ever Victorious Army,"—and the wholesale execution of red-turbaned rebels that followed, are matters of recent history. For thirty years the Triads showed no desire to place themselves in evidence in China, until now this hydra-headed monster has cropped up once again. Emboldened by the growing unpopularity of the Tartar government, the general discontent owing to flood, famine and bad times, the rebels have come to the front once more. The recent ferment along the Yangtsze is now admitted to be directed against the government; and any day we may hear the news that the Ko-Lo-Huey, which is simply another name for the Triads, has raised the flag of revolt. In the Straits Settlements and other places where the rebels had found shelter, these secret societies have grown so formidable and aggressive of late years that the English government has had to pass special legislation to give relief to the unhappy victims of their oppression and rapacity.

The Triads established themselves on this continent some thirty years ago under the style of the Chee Kung Tong, or "the Chamber of High Justice." (A Chinaman can do nothing without a flaming sign-board and a high-sounding name.) This society is generally known in the Eastern States as the Yee Hing Oey, or "Society of Righteous Brethren," being a branch of the Tong, whose headquarters is on Spofford alley, San Francisco.

During a raid made by the police a manual was discovered which contains much information not generally known. Its introduction gives a history of the rise of Triadism, a story that reads

more like a legend of King Arthur's days than a sober chapter of modern history.

In the days of Kang Hi, only 220 years ago, when the Manchu rule had hardly become settled, a rebellion broke out on the borders of the Kwang Si province amongst the then aboriginal tribes of the South. Imperial troops were dispatched to the scene of the revolt, but none returned to tell the story of defeat and massacre. Other expeditions sent forth met with no better success. The barbarians who had repeatedly vanquished the flower



Triad Banner and Secret Motto.

of the Imperial army were believed to be invincible. The government in its desperation issued proclamations offering rewards of money, titles and estates to the successful leader of an expedition against the malcontents of Sai Low. In the Kow Leen Mountains of the Fookien province was a Buddhist monastery called Shiu Lum, the residence of 128 monks, whose spare time was spent in athletic exercises, and whose admission to the order was gained by certain tests of bodily strength. Having read the proclamation, the monks started in a body for Pekin, were admitted to an audience with the Emperor, and offered to put down the rebellion without any military assistance. The Emperor, seeing their splendid physique and hearing of their feats of strength, was overjoyed. "Thank Heaven," he exclaimed, "that has given my country such stalwart men as these monks of Shiu Lum." Having received their Imperial commission they set out for Sai Low. The monks divided themselves into two divisions and fought with such skill and intrepidity that the rebels were seized with panic and fled. No quarter was given; the barbarians were cut to pieces till, as the record states, corpses covered the ground and blood flowed in streams. The victorious monks, without loss of life, returned to Pekin. The officials met them at the gates, the laureate sang ballads celebrating their victory, and the conquerors were escorted through the crowded streets to the Emperor's palace. When honors and rewards were offered them their leader exclaimed, "O King, live ten thou- "sand years! what have thy servants "done to merit these favors? Poor "friars are we, who have renounced "the world with its pleasures, riches "and honors, and have taken vows of "poverty that forbid us, O King, to "accept thy gifts." The monks now returned to their mountain convent, the country rang with their fame, but the court of Pekin was perplexed. The success and popularity of the monks aroused the jealousy of the Manchu soldiery; their rejection of Imperial favors awakened the suspicions of the government. One day two ministers of state, Cheong Kin Tsau and Chan Man Yew, sought audience at court, and accused the monks of high treason. "These men of Shiu Lum," said they, "have such superhuman power that "they can with a word bring down "the sky or raise the earth. Hordes "of barbarians that your Majesty's "troops tried in vain to subdue have "been exterminated by these monks; "and now what is there to hinder "them carrying out their seditious

"plots to seize the government and "overthrow the state?" At these words the Emperor trembled and his "dragon countenance changed color." "Alas," said the Emperor, "these tidings cause me much distress. What remedy can you suggest?" The ministers then stated in detail their plans, obtained Imperial authority to carry them out, and departed after assuring his Majesty that by the spring of the year all would be well. On the fifteenth of the first month Cheong Kin Tsau, with a body of troops, arrived at the Shiu Lum Monastery. The troops were left outside, while their leader and suite entered the gates, and with many expressions of respect presented a letter from the Emperor and a present of choice wine. The letter said: "We "have heard of your piety and learn- "ing, and how while others enjoy the "pleasures and luxuries of the town "you dwell in solitude, studying na- "ture in forest and sky. We have not "forgotten your brave deeds at Sai "Low, and have sent you a present of "wine with which to regale yourselves "this festive month." The abbot bowed reverently and said, "We are "but rustics of the hills, and have "done nothing to merit the Son of "Heaven's interest in our behalf." To whom Cheong Kin Tsau replied: "Nay! but my Imperial master often "alludes to your heroic deeds. His "Majesty desires to appoint you to "high military office, but you holy "men prefer meditation amidst forest "shades rather than the service of the "state. I, a humble officer of the "government, come here at his Majes- "ty's command to bear his gracious "message and present. Now, there- "fore, let the wine be drunk, that I "may hasten to other duties." Thereupon a feast was prepared, the tables spread, and the jars opened, when lo! a black vapor was seen to rise from the opened jars, filling the room with a poisonous stench. The assembled monks gazed at each other in blank amazement. "What wine is this that hath so offensive an odor?" demanded the abbot. "Bring forth our founder's "precious sword, and let the wine be "tested." The sword is produced, thrust into the jar, and withdrawn with evident marks of poison on the blade. Then was the abbot filled with rage, and demanded of Cheong Kin Tsau what they had done to deserve such treatment from a government they had served so faithfully. While he was speaking an explosion shook the building, flames and smoke burst forth, while on all sides were heard the sounds of battle horns and drums and the tramp of armed men. Hemmed in by flaming walls and the swords of the soldiers, escape seemed hopeless. Of the 128 monks only eighteen escaped. These rushed to the rear of the monastery, cast themselves upon the ground, and prayed the protection of Amitabh Buddha. The story is so interwoven with legend that we are not surprised to read that in answer to their prayers two genii appeared who opened up a way for their escape. These eighteen fugitive monks, pursued by the soldiery, now fled to the desert, where, as the narrative tells us, they were overtaken by a storm, and thirteen perished from exposure and starvation. The five survivors were soon discovered and again hotly pursued by the Tartar soldiers. After many vicissitudes, privations and hardships, we are told they one day saw a stone tripod lying by the wayside. While handling this utensil one of the priests discovered four mystic characters engraven on the bottom, "*Fan tsing, fuk ming;*" "overturn Tsing, restore Ming." *

Upon finding this tripod the five monks knelt down and worshiped Heaven and earth. A porcelain bowl was then used for a divining block, it being determined that, if the bowl were thrown thrice and fell unbroken, it should be taken as a sign that the blood of their slain brethren would be avenged. The fates were propitious, the omen was accepted as a

* Tsing is the name of the present reigning dynasty, and Ming the name of the late native dynasty dethroned by the Manchus in 1644.

pledge of victory, and these five Buddhist monks whose pictures are given in the ritual henceforth became the founders of the Triad Society, whose vow is recorded never to rest till the wrongs of their order have been avenged, the hated Manchu dynasty overthrown, and a descendant of the ancient kings placed on the dragon throne. Such is supposed to be the origin of the Triads, known in this country as the Chee Kung Tong and the Yee Hing Oey.

There is no time to follow its course during the subsequent two hundred years. Whatever may be its character to-day its original purpose was plain. Its founders set out to revenge a cruel massacre and break off a hated foreign yoke, objects which it has sought to accomplish by methods more secret and infernal than those adopted by the nihilists or the Clan na Gael.

It is impossible within the limits of this paper to give a translation of this singular little book, or to describe the elaborate ritual, oaths of initiation, secret signs, secret words and the military system that regulates this mysterious association. There are many characters and symbols expressed in terms, the meaning of which can hardly be guessed at.

The rite of initiation is a ceremony so terrible that one is not surprised to hear that nervous men have lost their wits passing through the trying ordeal. The sight of quaintly robed men moving solemnly about, fierce lictors and door-keepers brandishing spears and swords, the gorgeous altar with its gilded dragon carvings, tinseled drapery and heavy oriental hangings, the altar lights that burn dimly in the incense-laden air, lighting up the faces of the images of the five monks and the sterner visage of Kwan Kung, the god of war, is a spectacle in itself sufficient to strike with awe the mind of the superstitious novice who enters this chamber for the first time.

The neophyte is escorted by the champion Sin Fung to the first portal, where he is challenged, threatened with death, and finally admitted on giving the password. Here he casts off the Manchu costume, unplaits the queue, which is a Manchu appendage, and proceeds to don garments made after the fashion of the Ming dynasty. He now appears clad in a gown of five colors, a white girdle around the waist and a red cloth bound round the head. It is curious to note that this red turban was the distinguishing mark of the Tae Pings, who are still spoken of as the "red-turbaned rebels."

Entering the second portal the neophyte crawls on hands and knees under an arch of swords that meet teeth-like above him. The grand master of the society is called "Ah Ma," or "Mother." He is dressed in the Ming costume, with long unplaited hair, and is attended by his high officers of state on either side of the throne. The neophyte bows down before Ah Ma, and declares that he accepts the twenty-one regulations. A cup of wine is now prepared, the tip of each candidate's finger is pierced with a silver needle, and a drop of blood from each man's hand is allowed to fall into the wine cup. This potion of mingled wine and blood is drunk by the members present, symbolizing the admission of the candidates into the blood relationship. The neophyte also crawls under the bench or chair on which Ah Ma is seated, a ceremony which means being born again. In some places it is said Ah Ma is stripped naked; and the new-birth ceremony is too disgusting for description. The novice has now renounced allegiance to the Emperor, and foresworn forever his parents, kith and kin. Henceforth he is a member of the *Hung* family, and recognizes no other head but the grand master, who is at once parent and chief. It may be remarked that, in a land where filial piety is the first and most sacred of duties, it is not surprising that this society should be held up to universal execration.

At the third portal the neophyte is instructed in all the secret signs of the

society. Worship is offered to Heaven and Earth, to the spirits of the slaughtered priests, and to the spirits of the ancient kings. Incense and gilt paper are burnt, candles lighted, and libations of wine and tea are poured out to the gods. Thirty-five solemn oaths mostly in rhyme are chanted before the High Altar. A rooster's head is cut off, and as the blood flows the neophyte swears eternal fidelity to the head of the *Hung* state. He thus imprecates death by decapitation upon himself if ever his oath be broken, and recites words which may be translated thus:

From rooster's head, from rooster's head,
See how the fresh blood flows.
If loyal and brave my course shall be
My heirs immortal renown shall see;
But when base traitor and coward turn I,
Slain on the road my body shall lie.

He also swears never to divulge the secrets of the society or refuse to obey its mandates, imprecating upon himself the cruel death of the traitor Ma Ning. He also chants a stanza of which the following will serve as a rough translation :

By this red drop of blood on finger tip I swear
The secrets of this Tong I never will declare.
Seven gaping wounds shall drain my life away
Should I to alien ears my sacred trust betray.

Generally speaking, he swears to keep alive the spirit of revenge, and to wipe out in blood the wrongs done to the founders of the society. He vows eternal enmity to the Manchu government, and promises to use every endeavor to restore a native dynasty to the dragon throne.

A very singular custom is that which requires the neophytes to run the gauntlet of two ranks of Triad men, who are at liberty to inflict corporal punishment upon any one discovered to have been an old offender against the society. Having received with becoming submission this severe cudgelling, he is supposed to have expiated past offenses, past wrongs are forgiven, and he is received into the inner circle of the brotherhood.

Of course these ceremonies, with their accompanying signs and passwords, are a precaution against intrusion. Woe to the spy who, under pretense of becoming a member, seeks to discover its leaders and pry into its secrets. Maybe there is some truth in the popular belief that a few such attempts have been made by persons who have paid the price of their intrepidity, and have never been seen again. As a secret society the Triads

Precious Relics of the Triad Society.

1. Sacred Jacket of Shiu Lum Monks.
2. Sacred Beads or Rosary of the Five Friars.

make much of the language of signs and symbols. Signs and words that are meaningless to outsiders enable members of the society to discover each other, and hold communication in the presence of strangers. The ritual is full of these signs. With no key to their interpretation it is impossible even to guess at their signification.

The social custom of tea-drinking, and the ever-present pot of tea and tray of small cups, found in every Chinese store and reception room, furnish materials for a system of signs,

depending upon the positions of a certain number of cups in relation to the teapot. Sometimes the cups are arranged in a row, or in pairs, or placed on the top of each other, with the pot on the right-hand side. Sometimes the teapot is placed in the center with a certain number of cups arranged in different positions around it. Again the pot is sometimes placed in front, or behind the cups, or at one or other extremity of a row of cups. A great deal also depends upon which direction the spout points. On some occasions the cups are placed in the form of certain Chinese characters, notably the character *Hung*, the secret name of the society. Some significance is also attached to the way a cup of tea is drunk; as, for instance, when a person takes up a cup of tea, pours it back into the pot, and again refills the cup and drinks. Or the cup is taken up with five fingers and drunk while held with three. What all this means it is impossible to conjecture. To an outsider nothing unusual has taken place, and yet important communications have been made which only those *en rapport* have understood. In drinking tea a member of the Yee Hing or Chee Kung societies can always be known by the way he raises the cup to his lips. He takes hold of the edge between the thumb and two first fingers, the first finger being held inside the cup. In a crowd one member can discover another's presence by pressing the thumb and two fingers against another's arm or body, the thumb and two fingers being placed in the shape of the legs of a tripod. This is called "the three-cornered seal," and is usually applied from under the blouse. In a street quarrel a Yee Hing man is recognized by his fellows by having his queue twisted round his head from left to right instead of from right to left, the ends of the queue hanging over the right shoulder instead of the left.

Of the secret words used by the society I can only select a few from the vocabulary given in the ritual. If a member is ordered to kill a person he is told to "wash his body," the idea being that a baptism of blood can alone wash out the wrong done by an enemy to the society. A rifle is called a "big dog;" a revolver, a puppy; powder and bullet are called "dog feed;" and the order to fire is expressed by the innocent sentence, "let the dogs bark." These phrases will serve to illustrate the euphemistic terms used as secret words by members in conversation with each other on the public street, or where strangers are present.

1. Mirror of Yam Yeung.
2. Sacred Bowl.
3. Sacred Tripod used by the Monks.
4. Precious Sword of the Founder of the Shiu Lum Monastery.

It is no doubt the use of passwords, secret signs and other formulæ which has given rise to the impression that the Chee Kung Tong is a species of Free Masonry. This notion has been of great advantage to the Chee Kungs. It has given them a show of respectability that has long masked their real character from the eyes of American people. The fact is, as Mr. J. S. Hopper of Canton well says, "There is no more resemblance between Free Masonry in this country and the Yee Hing Society than there is between the Grand Army of the Republic and the Chicago Anarchists;" and this is

proved by the many overt acts of terrorism, violence and crime that have made this society so deservedly odious to all peaceable and law-abiding Chinese.

As the book of ritual was in all probability prepared two hundred years ago, we shall search in vain for any authority for the highbinder tactics of modern days. The character of the society has completely changed since it has been transplanted to this country. While retaining all the old political nomenclature and forms, it is practically dead as a revolutionary center. The horrors of the late rebellion, the savage cruelties perpetrated by its leaders, and the rapacity of their successors to-day, have so alienated the great mass of Chinese that they are in no hurry to support a cruel tyranny, in comparison with which even the grinding Manchu rule is a reign of mercy. Its political hopes extinguished it has now degenerated into a rendezvous of assassins and blackmailers. Professing to be a benevolent association formed for mutual protection it is in reality a self-constituted star chamber, an organized band of villains who rule with a rod of iron. It is not denied that there are respectable men enrolled in the association who would repudiate deeds of violence. These most likely joined under a wrong impression; but, once a member, withdrawal is next to impossible. The society's manual frankly admits that its members are drawn from all ranks of life,—rich and poor, learned and illiterate, honest men and swindlers, banditti of the mountains, pirates of the seas, and tramps of the public street. The respectable and honest are few and far between. The society is a cave of Adullam,—a resort for all who are in distress or in debt or discontented. The worst desperadoes of the Canton province, whose heads would have adorned the tower over some city gate had they remained in China, find an asylum under our beneficent laws, and procure congenial employment as the salaried soldiers of the Tong.

About three years ago a conspiracy was formed by the Victoria, B. C., branch of the Chee Kung Tong to assassinate the Rev. J. E. Gardner, a missionary who had been instrumental in breaking up the traffic in Chinese women that had been carried on there under the patronage of the Chee Kung Tong. With the aid of the police Mr. Gardner succeeded in detecting the hired asssassin, Lum Hip. In the room were found coats of mail and weapons of war; and on the person of Lum Hip was found a Chinese-written document which turned out to be a highbinder's commission. There was no doubt about its genuineness, as it bore the well-known seal of the Chee Kung Tong. It is a tell-tale paper and is worth translating, as it gives a clear insight into the workings of these so-called Chinese Free Masons:

To Lum Hip, Salaried Soldier:

It is well known that plans and schemes of government are the work of the learned holders of the seal; while to oppose foes, fight battles, and plant firm government, is the work of the military. This agreement is made with the above-named salaried soldier on account of sedition from within and derision and contempt from without. You, Lum Hip, together with all other salaried soldiers, shall act only when orders are given; and without orders you shall not act. But in case of emergency when our members, for instance, are suddenly attacked, you shall act according to the expediency of the case, and enter the arena if necessary. When orders are given you shall advance valiantly to your assigned duty, striving to be first, and only fearing to be found laggard. Never shrink or turn your back upon the battlefield.

You shall go under orders from our director to all the vessels arriving in port with prostitutes on board, and shall be on hand to receive them. Always be punctual; work for the good of the State (the society), and serve us with all your ability. If, in the discharge of your duties, you are slain, this Tong undertakes to pay $500.00 *sympathy money* to your friends. If you are wounded, a surgeon shall be engaged to heal your wounds; and, if you are laid up for any length of time, you shall receive $10.00 per month. If you are maimed for life, and incapacitated for service, you shall receive the additional sum of $250.00; and a subscription shall be opened to defray the expenses of your passage home.

This document is given as proof, as an oral promise may not be credited.

It is further stipulated that you, in common with your comrades, shall exert yourself to kill, or wound, any one at the direction of this Tong. If, in so doing, you are arrested and have to endure the miseries of imprisonment, this society undertakes to send $100.00, every year, to your family, during the term of your incarceration.

Seal of the Victoria branch of the Chee Kung Tong.

Dated July 2nd, 1887.

In the headquarters of the society is a courtroom, where so-called rebels against the State are tried and condemned, the presence of the accused at the trial not being thought necessary. A meeting is then held, where the members present deliberately select soldiers, whose business it shall be to discover the culprit and take away his life. How many poor wretches in this country have been done to death, and their corpses spirited away, the coroner will never know.

In San Francisco the power of the Chee Kung Tong is neutralized by the opposition of the other rival societies; but in the smaller Chinese communities of the Eastern cities they reign supreme under the title of Yee Hing. A Chinaman must have more than common courage to defy the mandates and brave the maledictions of the grim tribunal that works in the secrecy of darkness, and, in the eyes of the Chinese, has more power to give effect to its penal decrees than all the courts of the United States.

A few months ago a superintendent of a Chinese Sunday School, in New England, learning that several members of the school had joined the Yee Hing Society, informed them that they must either renounce that society or else withdraw from the school. Thereupon they withdrew in a body and proceeded to intimidate the non-society men, ordering them to leave the school under threats of loss of business and employment. They succeeded in frightening away all but two or three non-society men, who had been brave enough to expose the workings of the society, and were consequently threatened with death. It is superfluous to mention that this and all other secret societies are bitterly hostile to their Christian fellow-countrymen, especially in the case of those Christians who were former members of the Yee Hing and are naturally regarded as traitors. The writer counts, among the members of his church, one or two who had graduated to high rank in the society, but are now consistent Christians; and the persecutions to which they are exposed from the society, whose allegiance they have renounced, and whose vengeance they have dared to provoke, illustrates what it costs many Chinese to become Christians in America.

One of the worst features of this secret society—and the same applies to all the other highbinder associations—is its mischievous interference with the administration of justice. With unlimited funds at their disposal to employ counsel, suborn perjury, bribe the venal, and employ agents to intimidate the other side, it is almost impossible to secure the conviction of the criminal around whom this unscrupulous society has thrown its protecting arms. In proof of this there are many instances on record. There is the case of Lee Sam, a Chee Kung Tong man, who on the 11th November, 1887, was held to answer the charge of throwing vitriol in a Chinawoman's eyes, almost depriving her of sight; yet he was acquitted by the Superior Court, the woman having been in the interim intimidated to say that she could not identify him.

While the highbinders know how to save their friends from the law, they also know how to employ the processes of the law to fight foes. With sharp, cunning Chinamen, to say nothing of unprincipled white men in their employ familiar with the procedure of our courts, well versed in the laws of evidence, and capable of forging a complete and invincible chain of evidence, it is possible to trump up charges against innocent men who have been so unfortunate as to incur

the enmity of this relentless foe. Several visits to the State prison, and conversations with Chinese convicts, have convinced the writer that many innocent men are languishing in our penal settlements, the unhappy victims of highbinder conspiracies. This, however, is not as extensively carried on as in years gone by. To swear an enemy's life away or get him sent into penal servitude was once regarded as a surer and safer mode of revenge than to shoot him down on the street; but revelations made from time to time of the workings of the society, as for instance in the celebrated trial at St. Louis in 1885, when trumped-up charges of murder were brought against six members of the Che Clan, have tended to shake the highbinder's confidence in the efficiency of our judicial system as a machine for secret society vengeance.

To describe the smaller and less influential highbinder institutions would be to repeat much that has been written. The Chinese have a common saying, "When you only the head can "see you surely can tell what the "tail will be." Many of the local "hatchet societies" are the tail end of the Chee Kung Tong, or allies that do its dirtiest work. Others are independent hatchet establishments, alike in character, but hostile to each other. The Chee Kung Tong is generally looked upon as the most influential; and disputes between associations friendly to them are often referred to their arbitration. The origin of these smaller societies is easily accounted for: Some dispute has arisen in the parent society, and a faction secedes, forming for instance the Ping Kung Tong. Sometimes a number of Chinamen of the same clan, bound together by a common interest, combine to protect themselves against the aggression of some dominant association. Other societies are formed to control and protect, for instance, the brothel interest, as the Wa Ting Shan Fong; or the gambling interest, as the Hip Shing Tong; or the traffic in women, as the Kwong Tak and On Leong societies. Sometimes a society is started for purely benevolent, tribal, patriotic or social purposes, like our American clubs, but degenerate into highbinder societies. Some insult has been offered or injury done by members of another organization; this is resented by the younger and hotheaded members of the aggrieved society; a quarrel ensues, and the whole club easily becomes embroiled in a highbinder strife.

The initiation of "hatchet boys" is simpler than that of the triads above described. The candidate kneels before the god of war, crossed swords are laid on the floor in front of him, and a naked sword is held over his head while he swears fidelity and obedience to the directors of the Tong. At least twenty per cent of the members are salaried fighters, provided with chain armor, knives, revolvers, iron cudgels and other weapons of war. When a highbinder steals a woman out of a brothel under the protection of another society, or when a society, in its blackmailing raids, poaches upon the preserves of a rival Tong, there follows one of those little street battles which gives these soldiers something to do. When a slave woman escapes from a house of ill fame in which a highbinder society is interested, it is a common thing to swear out some charge against her, such as grand larceny. She is arrested, thrown into prison, and bailed out by her owners, who then have her in their power. If she agrees to return to the bagnio the complainant fails to identify her, and the case is dismissed. When the woman escapes to the mission and is arrested, the missionaries are able to protect the poor woman from the villains who, by means of the processes of law, would drag her back again to a den of infamy. In some cases the Chinaman who has helped the woman to escape is discovered, and is summarily dealt with unless reparation is speedily made. In two cases that have come under the writer's notice these men have been

charged with murder and thrown into prison. But for the interference of the writer they would, in all probability, have lost their lives or been sentenced to penal servitude.

There is a case still pending at Stockton, California, which illustrates this. A Chinese merchant of the Ko family married a woman from a den under the control of the On Yick Society. Mr. Ko had already paid a large part of her redemption money, and more exorbitant demands were made which Ko refused to meet. About two years ago charges were trumped up against man and wife. Ko was arrested and taken to Sacramento. The wife was afterwards arrested and taken *en route* for Auburn. This place she never reached. On the way there the police constable permitted the substitution of another woman. Mrs. Ko was spirited away and has never been seen since. Whether she is murdered or held for ransom, who shall say? The constable, a highbinder's agent, was arrested, convicted of kidnaping, and now seeks a new trial! Months passed, and then followed another tragedy. A member of the Ko family who had assisted in the prosecution of the constable was suddenly shot down in the streets of San Francisco. Over two years have passed since the kidnaping. Ko's wife has not been found, nor have the real criminals been brought to justice. Such cases as these shake the faith of the Chinese in our courts of justice. Who could wonder if a man like Ko, despairing of obtaining redress by legal methods, should employ some rival hatchet society to avenge his murdered wife and kinsman? Scores of similar incidents might be given. Let these suffice.

In the light of these facts it will be interesting to study the names of these so-called benevolent societies. High-sounding, grandiloquent signs have been chosen with unblushing audacity, and with painful disregard of the laws of congruity. One society, organized for the purpose of importing slave prostitutes into the country, rejoices in the name of Kwong Tak Tong, which means, "the chamber of far-reaching virtue"! Another society that traffics in women is called the On Leong Tong, or the "chamber of tranquil conscientiousness"! Glorious titles are given to the "hatchet societies" that are responsible for most of the shooting scrapes that have disgraced Chinatown. The Hip Shing Tong means "the hall of victorious union." The Hop Shing Tong means "the hall of associated conquerors." The Sui Shing Tong means "hall of auspicious victory." The Sui On Tong means "hall of realized repose." The Ping Kung Tong means "hall of maintained justice." An institution that draws a revenue from houses of ill fame enjoys the romantic name of Wa Ting Shan Fong, or "flowery arbor mountain booth." Two societies that raised in one meeting $30,000 to protect and defend the notorious assassin Lee Chuck are called respectively the "guild for the protection of virtue," and "the guild of hereditary virtue,"—fine names, it must be confessed, for two societies of such ingrained criminality as the Po Shin She and the Kai Shin She.

The associations above enumerated are the principal highbinder organizations in San Francisco. These are the bands of criminals who have defied our laws, terrorized over their fellow-countrymen and laid half of Chinatown under tribute. Their victims have calmly submitted to their rapacious demands, knowing that resistance was vain. With a bulldog at his throat a man cannot say or do much. It is better policy to keep quiet and pay the demanded percentage on his earnings and profits than raise a fuss that may only result in loss of business, loss of employment, and perhaps loss of life. With no one to interfere with them, secure under our laws and institutions, these associations have grown fat, flourished and multiplied. Some of them being incorporated as benevolent associations, they are assumed to be what they profess

until proved to the contrary. And who shall do this? Suppose they are proceeded against by regular legal process, against whom is an action to be brought? Who are the responsible heads? Who can identify the officers of the association, the criminality of which is generally admitted? Who will undertake to get behind the scenes, gain admission at the closely guarded doors, report proceedings at their meetings and gather evidence connecting the responsible officers of the society with the crimes alleged to have been committed at their instigation? It is certain that no white man could do this without being detected. It is equally certain that no Chinaman could be found with sufficient courage to run the gauntlet of armed men, and the certainty of being cut to pieces if discovered. Even supposing a Chinaman dared to come forward and expose these centers of crime, it is doubtful whether a jury would give any weight to his testimony, uncorroborated by white men's evidence, in the face of the hosts of witnesses marshaled by the other side.

To grapple with this evil by constitutional methods I know of only one plan, and that is the employment of a Chinese detective force such as can be found in the British colonies of the East,—men, even Chinamen, who have established a character for veracity, and whose word is believed in a court of law. When it is remembered that there is not an officer on the police force of this city who can read or speak Chinese, it is remarkable that so many Chinese offenders are arrested and convicted every year. There are no doubt many Chinese in Chinatown who are willing unofficially to aid the officers in ferreting out criminals; but as a general rule, and especially so in the case of highbinders, an irresponsible Chinaman is in no hurry to meddle with other people's affairs to the risk of his own life. There is no reason, however, why a Chinaman well paid, regularly employed and supported by the authorities, should not do as faithful and efficient detective work in this city as is done by the Hongkong native police, many of whom are brave, intelligent, upright men.

It may be interesting to glance at some typical highbinders and leaders in the various societies who are now in the hands of the law. The faces present an interesting physiological study. Their histories may be briefly told in the following, taken, by the courtesy of Chief Crowley, from the records of his department:

No. 1. Leong Yuen Gun, blackmailer and fighter, belonging to the Wah Ting Shan Fong Society. He is serving a ten-year sentence in the State Prison for shooting Jare Hoy on Dupont street.

No. 2. Wong Fun Kim, member of the Chee Kung Tong, a murderer and kidnaper. He was sent to the State Prison from Humboldt County for manslaughter, and from this city for stealing a Chinese woman.

No. 3. Lee Sam was arrested and charged with throwing vitriol into the eyes of Fong Lin, an inmate of a house on Sullivan alley. He is a prominent member of the Chee Kung Tong Society, and is known to the police as a very desperate character.

No. 4. Yee Hong Yuen, convicted with No. 6 of same crime.

No. 5. Tarm Poi, a murderer and "hatchet man," a member of the Chee Kung Tong Society. He has been sentenced to be hanged for chopping to death Fong Hoy, on the corner of Dupont and Jackson streets.

No. 6. Yee Lock, a robber and shooter of the Sui On Tong Society. He is now serving a sentence of fifteen years in the State Prison for garroting and robbing the wife of Mah You Lin.

No. 7. Lee Chuck, a murderer, blackmailer and robber, member of the Kai Shin She Society. He acted as the bodyguard of the notorious Fong Ching, alias Little Pete. He is now in the State Prison, serving a fifty-year sentence for murdering Yin Yuen on Washington Street at midday. Referred to in this article.

No. 8. Fong Ah Sing, a murderer and blackmailer, a member of the Tak Kung Tong and Ping Kung Tong highbinder associations. He succeeded in procuring articles of incorporation for his society, after which he exclaimed: "Now I have power!" This man shot and killed Toy Gam, an inmate of a house in Kung Kuk alley. He was hanged for this murder in the County Jail. The Ping Kung Tong is a branch of the Chee Kung Tong Society. These two societies are at enmity with each other.

Typical Highbinders.

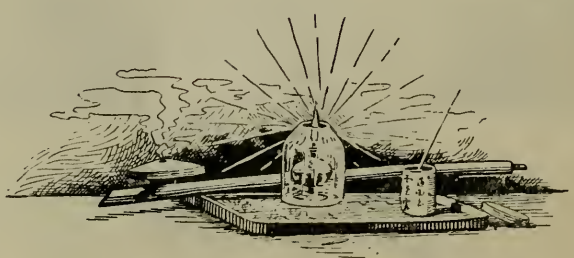
About a year ago they had a celebration, and a fight occurred, in which several persons were shot.

No. 9. Lee Kay, a Chee Kung Tong man. In the daytime, on Post street, near Dupont, he threw pepper into the eyes of a white woman and attempted to rob her. He was sent to the State Prison for twelve years.

There is another plan, and the only effective method of suppressing highbinder societies. The long-continued feuds, the frequent assassinations on the streets, the provoking taciturnity of Chinese eye-witnesses of crime when questioned by detectives, and the scandalous miscarriage of justice in highbinder trials, have demonstrated to a certainty that if Chinese secret societies are to be broken up it cannot be done by constitutional means. Last January a dozen highbinders opened fire upon each other on a public street of San Francisco in broad daylight. Before the police arrived the assassins had fled and covered up their tracks. The Chief of Police now resolved upon heroic measures, and very pluckily gave orders to break up their camps and halls of meeting. For two or three days the police invaded their headquarters, tearing down signboards, demolishing idols and furniture, and leaving nothing behind but a heap of débris. The Chee Kung Tong, the very center and pivot of highbinderism, was the last to fall. This caused the greatest sensation. It was then seen that the police meant business. The great mass of the Chinese were wild with joy. The news spread like wildfire. Merchants chuckled over their counters with undisguised satisfaction. Men walked the streets with a lighter tread. A heavy yoke seemed to be lifted off men's shoulders. The bloody hand of masked ruffianism had relaxed its grip upon men's throats. People breathed freer. The only unhappy looking individuals were the "hatchet boys," who were thrown into a state of panic and bewilderment.

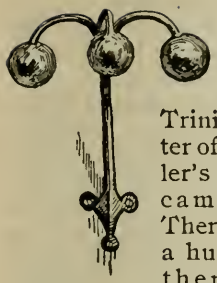
It must be a source of gratification to Chief Crowley to know that his action is universally indorsed, not only by Americans, but by the Chinese legation and consulate, the Six Companies, and the Chinese merchants, hundreds of whom, it is said, have signed a paper undertaking to indemnify the Chief against any possible loss in an action at law. The result proves unquestionably that the great majority of Chinese in California are on the side of law and order, and shows how a few hundred desperadoes can domineer over a whole community.

Let highbinders and all other sons of nox and chaos beware, that whether they belong to the Chee Kung Tong, the Mafia, the Clan na Gael or any other such association, this country is no place for secret tribunals, bloody plots and dark conspiracies; and if they will defy our laws, assassinate innocent people, and tamper with our courts of justice, they will do so at their peril; for a long-suffering but outraged community may rise some day and cast them forth with all other devil-possessed things into the Gadarean abyss.



A CHRISTMAS AT LEDGER'S.

By George Brooke.



THERE was a mining camp on the Trinity in the fall and winter of '52–'53 called Buller's Flat. It was a small camp and a poor one. There weren't more than a hundred men working there at any time, and those who were there were never very well to do. So poor indeed was the camp at the time I write of that it boasted only one drinking-saloon and gambling-house.

This same gambling-house was run by a man called Ledger, a good-looking scamp enough, tall and dark, with black eyes and mustache. Always well dressed and carefully groomed, he was the best-looking man in camp; not that any one save himself thought or cared anything about that; but there was a woman there with whom every last man of us was in love; and good clothes and shining shoes make a heap of difference to a woman, or at least men always think so, and we thought so and consequently were jealous of Ledger. There was only one man in camp though outside of Ledger that any one of us thought had a chance with the girl, and that was my partner Jim Pardee. Jim was popular, and never a man in the outfit begrudged him his chance with the girl; but all the same they were jealous of Ledger and swore that sooner than see him carry her off they would string him up to the handiest sugar-pine.

The girl was called Kit. She was only sixteen or so,—just a slip of a thing with yellow hair and gray eyes, and no figure to speak of. She lived with an old reprobate who called himself her father and passed under the name of Rowan. I never knew whether he was her father or not, but anyway he said he was, and the boys accepted him as Kit's parent, and his flour sack was never empty, and his coffee and bacon never grew less. He was a loafer, was the old man; he hung around Ledger's from night till morning and then from morning to night again, until he got his usual load of alcohol on board; then he staggered home to his cabin and turned in. He never abused Kit after one night Jim caught him at it and frightened the old chap so that he swore never to lay hands on her again, and his fear of Jim made him stand by it.

Jim and I were partners, as I have said, and he had told me many a time how much he loved Kit, and said that all he wanted of the world was dust enough to buy and stock a ranch he knew of in the Sacramento Valley, and he'd marry her and carry her off there, and they'd live happy ever after.

Jim would sit and talk about Kit and that ranch till all hours, and I'd just go to sleep and fall off my seat and wake up to find him still talking about them; but our claim never panned out rich, and one day we made up our minds that we had to leave the flat or starve; the fact was Jim had only stayed as long as he had on Kit's account. He hated to go and leave her, and so did I for his sake, but go we must, so one night after supper we packed our stuff and got all ready for an early start next morning; and then Jim went off to say good-by to Kit, and I went down to Ledger's to say good-by to the boys. I found old Rowan there of course; he was half asleep in a chair near the stove, and Ledger was dealing bank. I made a couple of plays just for the good of the house, told the boys we were off come morning, stood a round of drinks and went back to camp and turned in.

Jim did not come back for some time after, and I could see by his face that

he was mightily pleased at something, and I could easily guess what it was. In the morning, bright and early, we were off. It was the 25th of September; I remember the date as though it were but yesterday; we were going to prospect up a little creek that Jim had located one day a few miles above the flat. This creek emptied into the Trinity, but it was such a narrow, rocky little stream where it emptied, that unless it widened out higher up there wasn't much show for color even. However, we pushed our way up that creek for two or three days of as hard traveling as I ever did. Finally one day, just as we had made our way through a particularly tough mile or so, we struck the prettiest little flat any one ever saw. The mountains seemed to rise up straight and wall it in all around, and I don't believe any white man ever set foot in it before; it was about a hundred feet across and as many yards long, and the stream wasn't more than twenty feet wide, and very shallow, for there hadn't been any rain yet. We knew the gold must be there. We were dead tired that night, but we couldn't sleep, or eat even, until we had washed a pan or so of dirt just to see the color of the stuff. Jim said it reminded him of Kit's hair, and we saw from the first panning that we had struck it. Old Jim danced around me and yelled until the walls of the cañon fairly rang, and had a small drink out of our precious little jug, and had supper, and turned in to dream of all sorts of good things happening.

To make a short yarn of it, we mined there until the first of December, and then Jim says to me one night after supper: "Partner, I'm going to make a final clean up and 'divy' to-night. I promised Kit I'd look her up and get married by Christmas, and I reckon I must rustle if I'm going to keep my word." Of course I assented. I always did when Jim proposed anything, someway or another, and said as long as he was going down the river I'd go along and see him through. So we got out the buckskin sack and weighed out the stuff, and found that we had close on to $20,000 apiece in dust and nuggets. I tell you we felt good.

Jim said we'd go down to the Flat, get Kit, look up a parson or a justice, or somebody that could marry 'em, get spliced, and then go down to Sacramento, buy that ranch, and live like white men once more. So next morning we started for Buller's. We got there safe enough, but the only soul on the location was a Chinaman, and of course he didn't know anything about anybody; he was making a living out of a deserted claim, and that was all he cared about. Jim was knocked cold; he didn't know what to do next or where to go; Kit had disappeared as though the ground had opened and swallowed her, and where was he to look for her? We talked the matter over and over again that night, as we sat, after supper, in one of the abandoned cabins, and could come to no conclusion. We sat smoking for a half hour or so, when suddenly Jim jumped to his feet and says: "Partner, we'll go to 'Frisco and find Ledger. I'll warrant he'll know where old Rowan is, and, unless I'm mightily mistaken, where Kit is, too." "I go where you do, Jim," was all I said, and we turned in then, and next morning, before sun up, were off for the bay.

We got into 'Frisco on the 20th of December; there had been lots of rain in the mountains, and all the creeks were rivers, and all the rivers lakes, and we had to go a mighty long way round, but we got there just the same, and on a Monday afternoon we two flung our packs down in Frenchy's lodging-house, near the Plaza, got something to eat and had a jaw with the boys, and along about six o'clock Jim came to me and said he had Ledger located and we'd go see him and find out what he had to say. "I'm going to make him tell me everything he knows about Kit," said Jim, "and you better have your gun handy, partner, for you might need it." Jim was always jealous of Ledger, though I

never could see why, for Kit never favored the man; she would talk and laugh with him if they happened to meet, and sometimes he would make her little presents, but any one could see that Kit cared nothing for any one save Jim; and although Ledger was a scamp he wasn't a scoundrel, but then Jim was dead in love with Kit and would have been jealous of a Chinaman if she'd smile at him.

I followed Jim out into the street; it was pitch dark and raining in sheets, and the mud was knee deep. Jim led the way across the Plaza onto Kearny Street with me at his heels. The only lights were those in the saloons and stores and gambling-houses. Men were elbowing and pushing their way good naturedly through the mud in and out of the doors of the different drinking-places, until it seemed to me that every man on the Coast must be in 'Frisco for Christmas. At last Jim stopped in front of a place called the "Lone Star;" it was a big drinking-saloon with a gambling outfit in the rear and a free-and-easy dance-house upstairs. Jim caught my wrist in his hand and fairly hissed in my ear as he nodded at the lighted windows upstairs; "Partner, if Kit's up there, I'll fill that —— —— Ledger's hide so full of holes it won't hold blood," and I knew that he meant it, too. "Come on," he said, and I followed. He pushed through the crowded barroom, merely glancing at the men behind the counter, but Ledger wasn't there. Pushing open the swinging doors the gambling-hell was before us; there were seven or eight faro games running, and several Spanish monte dealers were scattered around at different tables, and sure, at the bank, side of the most crowded faro table, sat our man, dealing.

As soon as Jim saw him he started for him, but I put my hand on his arm and said: "Steady, Jim, take it easy, old man; you can't bluff him (for I knew Ledger had plenty of pluck); speak to him softly and let's find out something if we can." So we strolled up to the layout and stood overlooking the game for a moment or two before Ledger caught sight of us; when he did, he called out, "Why, Pardee and Pard (they always coupled Jim and me that way at Buller's), where have you dropped from." He answered pleasantly enough and gave him the time o' day, and then we made a play or two. Presently Ledger finished the deal, and calling another dealer to take his place he came around to us and asked us to go into his private room and have a drink and a talk, and we did, and after we had had a drink Ledger turned round on Jim and said, "See here, Pardee, you're down here looking for Kit;" and as Jim started to deny it he kept right on and said, "No use denying it, for I know all that was between you and Kit." Jim stared at him, too surprised to speak for a moment, and then said, "Well, if you know that much, you must know I am looking for her, but how did you know she had left the flat? and by —— Ledger," he went on, "I'm going to find her too, and you might as well tell me, first as last, where she is." "Jim," said Ledger, and he laid his hand on his shoulder, "I don't know where she is; if I did I'd tell you, for I know Kit loves you, and as long as I haven't a chance myself I'd sooner see her your wife than any other man's I know, and I'll help you find her with the last dollar I've got and the last shot in my gun." He looked Jim straight in the eyes as he said this, and Jim looked him back again, and, after a moment's silence, Jim put out his hand and said, "I believe you're true this time, anyway, Ledger, and I'll trust you; shake hands on it with me and my 'pard,' and we'll find Kit if she's on top of earth." We all shook hands then and had another bottle of fizz, and over it Ledger told us how, soon after we left Buller's, old Rowan came to him and said he was going off on a prospect to look up an old claim he knew of, and he wanted some one to take care of Kit while he was away,

and if he (Ledger) would give him five hundred he could have her and welcome. Jim nearly had a fit when he heard this, but quieted down, and Ledger went on to tell how he had gone to Kit and told her that he loved her ("and I did and do love her yet," he said, and I could see from his eyes and voice that he meant what he said), and asked her to marry him, but Kit told him she was going to marry Jim come Christmas, and that she loved Jim and no one else. Ledger told old Rowan Kit's answer, and the old brute raved and cursed and swore that she should never marry Jim; he had never forgotten the gentle pounding he had had from him for licking Kit when he was drunk one night, and next day Buller's found itself less in numbers by two, and old Rowan and Kit were gone. Ledger only stayed there long enough to close up his place after that, for he said he had only been staying there on account of Kit, and then made his way to 'Frisco. He had heard of Rowan since he had come to the bay. The old man had been there, and Kit was with him; but no one had seen either of them for many weeks, Ledger said, and he had been too busy to look for Kit before; but now he had a man whom he could trust around the place to look after things, and said he would go halves with Jim in money, time and everything else it cost to find her; for he said to Jim and me that night that though he was no saint yet he knew a good woman when he saw her, and he not only knew poor little Kit was good, but (and here there were tears in his voice, and his eyes, too, and when a man can't talk except in that way about a girl you can gamble he loves her) he loved her beside, and he would go through anything to see her safe in Jim's arms. We all shook hands again at this; and then Jim and I said good-night to Ledger, made our way back to Frenchy's and turned in.

Things ran along after that arrangement for a week, and Jim, Ledger and I had been in every place in 'Frisco where we thought Rowan might have put Kit (and a good-looking girl was worth a whole lot of money here in those days), but we could find no trace of her and had begun to make up our minds that the old man had taken her with him wherever he had gone. Jim had grown silent and morose, and to my surprise had taken a distrust to Ledger. I had grown to like Ledger very thoroughly since I had known him better. He was generous and good tempered to a fault, slow to quarrel, and as brave a man as ever stepped. I reasoned with Jim, but could not argue the idea out of his mind that Ledger knew where his Kit was and was keeping him from her. Ledger noticed it too, and spoke to me about it, and I agreed with him that it was so; but he made excuses for Jim and said that it was only natural, and if he were in Jim's place he would be so too. It had rained all day long. Christmas eve the wind blew from all the points of the compass at once, and about five in the afternoon Jim gave up his search. He had been on the keen jump for the past four days; and he had not eaten or slept hardly during that time; besides he had been drinking more than usual. I suppose his grief and disappointment were more than he could bear; and altogether he was in a very moody, irritable condition when we parted at the Plaza, he to go to Frenchy's and I to go to Ledger's. "You'll find me in my bunk when you come back," he called after me as I was making my way across the street. When I got to Ledger's I found him just going out to supper, and I went with him; we talked the matter over as we eat, and came to the conclusion that Rowan must have gone away from 'Frisco and taken Kit with him. After supper I wanted to go out and buy some toys and other things for the kids of an old pal of mine who was dead and whose widow was taking in washing to keep the young ones together. Ledger volunteered to come along, so together we made our way through the crowded streets thronged with miners, gamblers and adventurers from every

country under the sun. It was a gay, careless crowd enough, and you could hear the click of the roulette wheel and the cries of the monte dealers from almost every door as it swung open to the men coming and going. The store we were making for was kept by a Jew named Isaacs, and stood on Kearny Street near the Plaza. When we got there the place was crowded, and at one side of the store an auction was going on of unredeemed pledges; for Isaacs carried on a pawnbroker's business in addition to his store, and lent money on anything from a miner's pick and gold pan to a gambler's diamonds. Ledger and I had finished our purchasing and turned to leave when our attention was attracted to the auctioneer's stand by a laugh from the crowd, and to our surprise we saw a woman closely veiled and cloaked standing at his side, and he was informing the crowd that she was the next pledge to be sold. I could hardly believe my eyes or ears, but there she stood; and the auctioneer went on to descant on her beauty of face and form. I thought she was, of course, some woman of the town who had pledged her jewels or valuables of some kind with Isaacs and tried this means of raising the money to redeem them in preference to having them sold. The Jew on the stand had just finished his remarks to the crowd on the girl's dancing and singing, and some brute in the audience had shouted to him to unveil the girl and let us hear her sing, when I caught sight of a Frenchman who ran one of the most notorious resorts in the city standing near the stand. He must be there to bid on the girl, I knew, and if she fell into his hands her life would be a perfect hell. He would pay a big price for her, for a woman in those days was a gold mine in 'Frisco; and many a man who is to-day a respected member of society made his money out of them. I no sooner saw the Frenchman than I made up my mind to measure my sack against his, and if mine was the longest the girl should go free, when Ledger's hand fell on my shoulder and he muttered in my ear: "Pard, do you see that man there?" pointing to the fellow I have spoken of. "By—— I'll buy that poor soul's freedom and save her from his clutches if it costs me my last ounce." "I'll go you halves, Ledger," I answered, and if we haven't enough between us I know Jim will help us out for the sake of the little girl we are looking for."

The bidding had begun by this time, and was opened by a thousand-dollar bid by a capper for the shop. A big, good-natured, half-drunken Irishman raised it five hundred just to show his regard for the sex in general; and after a few scattering bids it reached five thousand, the last bidder being the Frenchman. Ledger waited a moment to see if any one would raise the last bid, and then went a thousand harder; the Frenchman bid five hundred more; I raised him a thousand. By this time the crowd had become interested and had begun to chaff the Frenchman, and he went me a thousand more only to be met by another thousand from Ledger. The crowd cheered at this last bid, and our rival, evidently nettled at the opposition he was meeting with, raised Ledger five thousand dollars with a triumphant ring in his voice that seemed to say, beat that if you dare. Ledger waited just a second until the surprise at the size of the last bid had subsided, and then quietly remarked, "ten thousand more." At this the audience fairly yelled, and our Frenchman swore hard in his own language and left the place amid the jeers of the crowd. Ledger and I made our way to a private room to settle about the payment of the money. I was ahead, and as I stepped into the room there was a cry, a rustle of skirts, and Kit's arms were around my neck, and Kit was laughing and crying both at once and raining kisses all over my rough, bearded face, and calling me dear, dear, dearest old pard, and demanding to be taken to Jim all in one breath.

I was simply paralyzed with surprise, and as for Ledger he was dumb. "How on earth did you get

The Auction.

here, Kit?" at last I found my tongue to ask, and then as well as she could in her excitement she explained how old Rowan had brought her to 'Frisco, and after he had tried every means he could think of to raise money without success he had pawned her to Isaacs, and he had loaned him the money he needed for his scheme, whatever it was. Isaacs had kept Kit locked up in the rooms over the store, never allowing her to go out unattended, and then always in the evening and closely veiled and cloaked. The night before the auction the Frenchman was brought in and introduced to her, and Isaacs had tried to persuade her to go away with him then, but Kit refused and insisted on the contract being carried out to the letter, and so was auctioned. She had not recognized either Ledger or me in her excitement and through her thick veil, but she knew Ledger's voice when he made the last bid, and turning to look for him she saw me and thought we must have known whom we were bidding for, and she was awfully disappointed to find we did not, but insisted that Jim would have, had he been there. Ledger being well known in 'Frisco arranged for the payment of the money, and getting Kit's poor little bundle together we started for his place where, he said, Kit could stay; and I volunteered to get my widow to come down and stay with her and take care of her. We sent out for some supper, and over it we decided not to let Jim know anything about the affair until the next night, when we were all to dine together at Ledger's and give him a good old-fashioned surprise, and Kit for a Christmas present. Ledger was to have a parson on hand to do the marrying, and the widow was to look after Kit's wardrobe and have her a white dress ready to be married in. Ledger and I left the widow and Kit deep in the discussion of ways and means; they had plenty of money and were to spare no expense. I went home to our lodgings and found poor Jim in such a state of the blues and nearly wild from drink and loss of sleep that it was on the tip of my tongue to tell him everything, but I could'nt bear to spoil our plans. I gave him Ledger's invitation to dine with him, but the poor old chap wanted to refuse, and I had to use all my powers of persuasion to induce him to promise to come. At last he did, and then we turned in, but Jim just lay in his bunk and tossed around all night thinking of Kit. Next morning we started out again and made a round of all the places in town in which women were employed, and every time we came out of one of them Jim would say, "Pard, old man, I'd sooner kill my poor little Kit with my own hand than find her in one of those places, and by ——, I'd kill her anyway if I did find her in one, but I'd kill the man who put her there first," and so the day passed. We hadn't seen Ledger all day, and about five o'clock Jim said, "Well, we might as well be going up to Ledger's now if we're going to feed there." So we started up Kearny Street to Ledger's, and as we came opposite the house Jim happened to glance across at the upper windows. There were lights in the rooms, both in the dancing-rooms and in Ledger's own private apartments, and there in the latter stood Kit all dressed in white. She looked like an angel to my eyes as she bent over a great basket of flowers that stood on a center-table. Jim never said a word. He just stood for a second or so as if dazed; then I heard him mutter to himself, "the man first, the man first," and before I could stay him he was dashing across the street, making for Ledger's. I was close behind him, yelling to him to stop and let me explain, but he never heard me. He dashed through the bar and into the gambling room, and there at a table at the upper end of the room sat Ledger, dealing. Jim had his gun out by this time, and every one made way for him. Ledger saw him, and knew by his eyes what was coming. But he never flinched. He sat there pale and still

as a statue, with a half smile on his lips, and never made a move save to finish the turn and call the cards as they slipped out of the box. Jim covered him, looking him straight in the eyes, and fired before a man could stop him; and Ledger went down, and the room was in confusion. Some yelled, "lynch him!" but there Jim stood, the smoking weapon in his hand, glaring around like a madman, with a look in his face that instinctively made the crowd fall back. In a second I reached him and had explained, and if ever a strong man weakened he did, and with a leap he pushed the men aside who were picking Ledger up, and had him in his arms. "For God's sake, old man," he said, "say you're not dead! I didn't understand. I didn't know." "It's all right, Jim," gasped Ledger faintly, "she's all right," and then he fainted dead away. Jim lifted him like a baby and carried him through the crowd and up the stairs into his room. I left him with the doctor that had been sent for, and in a few minutes I went into Kit's room to tell Jim he was only wounded. There he was, kneeling by her side, his rough head in her lap, broken down in the very time of his greatest joy. But the word I brought made another man of him, and it wasn't long before Jim went to him, and what they said,—well, Jim nor Ledger never mentioned it. It was Christmas evening but Ledger, with a bad wound, did not forget it, and insisted that everything should go on as he he had planned it, and his word went that night, you may believe.

The parson arrived on time and stood near the bed. Jim and Kit stood in front of him with the widow and me for maid of honor and best man. Ledger gave the bride away, and every last man in the crowd who could jam himself into the room solemnly kissed Kit and passed out, and as he went he dropped a sack of dust or a couple of nuggets into a hat that some one had placed at the door, and it made a mighty good bank-roll when it was turned into coin.

And then we had dinner. Ledger was the life of the outfit. We moved the table into his room, and although he didn't eat anything the doctor allowed him a glass of champagne to drink the bride and groom in, and he made a speech and I made one too, and Jim tried to make one and broke down and cried, and Kit wiped his eyes with her handkerchief, and we had a very merry Christmas. Ledger got well and is alive to-day, for I met him last week just in front of where the gambling-house stood on Kearny Street, and that is how it came into my mind to tell this story.

THE PUBLIC DOMAIN.

By Lewis A. Groff.

THE best disposition of the remainder of the public domain is a problem which merits the attention it is receiving from the thinking people of the West. The interests of the General Government, of the States and Territories within which the lands lie, and of the prospective settler, must all be considered in the solution of this problem.

It would have been impossible to fulfill the duties of the office of Land Commissioner without forming some opinions upon this subject; and the exceptional opportunities for studying the inner workings of our present system of land laws under which these opinions grew into convictions must give them whatever claim they may have upon the reader's attention.

Although nearly 19,000,000 acres—a body of land rivaling in area the combined States of New Hampshire, Rhode Island, Massachusetts, Connecticut and New Jersey—were patented to entrymen under the settlement laws of the Government for the fiscal year ended June 30, 1890,* there remained at that time, according to the best estimate the General Land Office could make, 586,216,861 acres of unsettled public lands within what are known as the land States and Territories. This estimate excluded the Cherokee strip, containing 8,004,644 acres, as well as other lands owned or claimed by Indians in Indian Territory west of the 96th degree of longitude. It also excluded Alaska, with its area of 369,529,600 acres, of which not to exceed 1,000 had been entered under the mineral laws in pursuance of Act of Congress, March 17, 1884. The general land laws have not been extended to Alaska. Enough is not yet known about the climate, soil or productions of that wonderful country to justify either putting its immense area into the same category with other public lands, or formulating a new system in regard to it. It is therefore only with that portion of the public domain which lies within the land States and Territories that I will attempt to deal.

The above total of 586,216,861 acres lies west of the 100th meridian, with the exception of about 26,000,000 acres. Of these at least 10,000,000 are swamp and unfit for settlement until reclaimed. About 7,000,000 more are heavily timbered, wet, and unsuitable for farming. The balance is largely prairie, situated in Minnesota, and those portions of the Dakotas, Nebraska, Kansas and Oklahoma lying east of the 100th meridian. There are also small tracts distributed throughout the other land States.

The 560,216,861 acres lying west of the 100th meridian, excepting those portions situated in Northern California west of the Sierra Nevada Range, and in Oregon and Washington west of the Cascades, are within what is known as the arid country. Save a few valleys where rain falls, and others with natural sub-irrigation, this vast area is unfit for agriculture unless reclaimed. In many places reclamation is impossible because water cannot be obtained. Some districts are so hopelessly sterile that irrigation, if it were practicable, would be useless. Large tracts are mountainous and of no value save for their timber, or as minerals are discovered in them.

In California, Nevada, Oregon and Washington large districts of the finest timber lands on the continent are at present being disposed of under the Timber and Stone Act of June 3, 1878, which Act applies only to lands situate in the above-named States. This law

* When this paper was written, the report of the Land Office for the fiscal year ended June 30, 1891, had not been published.

limits the quantity of land which may be acquired under it by one person or association of persons to 160 acres at $2.50 an acre; requires the entryman to make affidavit that he has made no prior application under the Act; that he is a citizen of the United States, or has declared his intention of becoming a citizen; that he designate, by legal subdivision, the tract he desires to purchase, setting forth that it is chiefly valuable for timber or stone, and unfit for cultivation if the timber were removed; that it is uninhabited and contains no mining or other improvements; that he believes it to contain no valuable mineral deposits; that he does not apply to purchase the same on speculation, but for his own exclusive use and benefit; and that he has not made any agreement or contract by which the title he may acquire from the United States shall inure to any person except himself.

It is further provided that any person swearing falsely to such affidavit shall be guilty of perjury; that he shall forfeit the money paid for the land; and all conveyances of the land shall become null and void as against the United States. It is made the duty of Registers and Receivers to read this affidavit to the applicant, or to cause it to be read to him in their presence, before the applicant swears to the same or attaches his signature thereto. Other safeguards are prescribed by the General Land Office to prevent fraudulent or procured entries under this law.

It is evident that Congress intended this Act to answer a wise and beneficent purpose. It was undoubtedly thought that it might do for the frontier lumberman what the homestead law had done for the frontier agriculturist. It has not only failed of accomplishing this object, but has corrupted whole communities, where associations have been formed for the purpose of making fraudulent entries thereunder. Despite every effort of the Land Office and of the Department of Justice to prevent it, and to punish offenders, these organizations continue to practice their nefarious methods. The result is that immense areas of these valuable timber lands, —which it was intended should be distributed in small bodies to individual owners,—through the exercise of wholesale perjury and fraud, have passed into the hands of rich and powerful corporations. This law ought to be repealed; and until the President has made the forest reserves contemplated by Act of Congress, March 3, 1891, no further disposition of timber lands should be undertaken. These reserves completed, Congress might pass a law providing for the appraisement and sale of all lands chiefly valuable for timber. It may be urged that our lumber supply will soon be exhausted if these lands are sold without reservation. But private owners can, and will, manage the timber more economically than does the Government, and save to the country much that under a continuance of the present system would be destroyed. No one takes care of public forests. Every one not withheld by conscientious scruples poaches upon them. Timber depredators take only the best parts of the best trees, leaving immense quantities awaiting the touch of the hunters' match. Fire consumes annually more than the market. It is impossible for the Land Office to prevent either these depredations or this destruction. Private owners, in guarding their own interests, would at the same time secure those of the public. The law authorizing the sale of timber lands should also provide that neither timber nor lumber shall be exported, thereby preserving and cheapening lumber for home consumers.

The timber lands disposed of, there will remain only the arid and mineral lands, a few bodies of swamp land, and the small agricultural tracts lying east of the 100th meridian. All swamp lands belonging to the States under existing grants might be speedily patented, and any remaining granted to the States wherein situated,

on condition that they be reclaimed within a reasonable time by the States or their grantees. The small bodies of agricultural land lying east of the 100th meridian might also, if not entered under the homestead law within a given time, be granted to the States in which they lie. A similar disposition might be made of the arid and mineral lands under proper restrictions as to their disposal and development, and, in the case of arid lands, their reclamation. When the remaining Territories have been admitted to statehood, the lands within their borders could be granted to them on the same conditions.

Of course, many objections may be urged against these suggestions, but the precedents for the course of action outlined are already established. Swamp lands have been liberally granted by Congress to several of the States. Directly or indirectly, immense grants have also been made them for canals, railroads and other internal improvements. The seventeen States formed from the territory of the original thirteen colonies administered their own land system and received the revenue derived therefrom. Texas does the same to-day.

Furthermore, since the enactment of the homestead law, it has been the policy of Congress to dispose of public lands with a view to the settlement and upbuilding of States, and the making of taxable property, rather than for direct revenue; and, if this object could be more efficiently promoted by the States themselves, the relinquishment of the small income received by the nation under the present system ought not to be an obstacle to the change. Or if judged advisable it might be provided that the States, as fast as they dispose of lands, shall pay into the national treasury a sum per acre equal to the net price the Government now receives.

I repeat the statement made in the beginning of this paper, that, in the solution of this public-lands problem, the interests of the General Government, of the States and Territories within which the lands lie, and of the prospective settler, must all be considered. Take first the case of the States. This is a vast country. No general law is broad enough to cover such diverse cases as may arise, say in Florida, Wyoming and California. The Legislatures of the several States can best determine by what methods their arid and swamp lands can be reclaimed, their mineral lands developed, their agricultural lands made to support a teeming and happy population; and how, in accordance with these ends, to condition their disposal. Congress is too far off,—its knowledge too abstract. It is overburdened besides. The Land Office itself sits like an incubus upon its breast. No one who has not frequented the sessions of our national assembly or examined the *Congressional Record* can have any idea how much time land legislation consumes, or how unsatisfactorily it is performed. Precisely here appears the great benefit of the suggested change to the General Government. Relieved of this load, Congress could devote the time now spent on land matters to weightier questions whose consideration cannot be relegated to the States, and its efficiency would be incalculably increased. To settlers it is plain that the new order of things would be a boon. They could transact their business through an office within the confines of their own State instead of one hundreds or thousands of miles away, one burdened besides with the business of many other States. The "law's delay" under the present system works much hardship and injustice. No doubt it also bears its share in the encouragement of malpractices. With prompter decisions would probably come a reduction in frauds, claim-jumping and the like, thus promoting public morals as well as the security of honest settlers. Again, the money for lands would be kept at home and redistributed there,—not a small

advantage to a new and struggling commonwealth. Is it feared that the supersedure of the present order of things would cause disorganization and distress? No violent change will be necessary. Several years would be required to bring up the arrears of work in the General Land Office. The older employés would probably find occupation there for the balance of their lives. The younger ones, with their experience, could command positions in the State offices that must be established.

MY LIBRARY.

By J. W. Wood.

WITHIN these covers, homely tho' some be,
Life's kaleidoscope is writ in varying stage,—
The tragedies of war and poets' melody,
The mimicry of love, philosophy of sage.
Here warrior tells his deeds of valor o'er,
With gallant knight who poised his lance for fame;
The antiquary fraught with mystic lore,
The pensive lover sighing forth his flame,
'Tis here most strange and pleasant company;—
The sparkling wit, the weirdly muttering crone,
A rondeau neat, a dismal threnody,
Compose this mimic world in calf-bound tome.

Here let me muse in silent reverie
Amidst these mystic scenes of by-gone age,
And with the æons past and æons yet to be
Weave witcheries for yet unlettered page.

AT THE DRY TORTUGAS DURING THE WAR.

A Lady's Journal.

[The history of the late war has been well described in various publications, but that portion relating to the famous Dry Tortugas prison, where thousands of men were kept during the war, and where those connected with the assassination of President Lincoln were confined, has never been described, yet the events are now of great historical value. The island upon which the great prison was established was a sand bank comprising but thirteen acres,—one of the last of the keys representing the end of the great Florida reef. For seven or eight years a lady, the wife of one of the surgeons, lived in this isolated spot and viewed all the incidents from the appearance of the first war cloud until the declaration of peace. The following chapters were not written or intended for publication, the events being jotted down simply for friends in the North; and THE CALIFORNIAN has been enabled to give them to the public in a series of chapters, believing that many are of historical interest and value, and also as showing the singular life of a lady in one of the most out-of-the-way spots in this country. Future chapters will be illustrated with views of the great prison, the largest stone fort on the western continent.—EDITOR.]

THE great progress in modern scientific warfare within the last quarter of a century has made fort-building to our Engineer Corps a difficult problem. Discoveries in destructive power so keep pace with those of resistance that for humanity's sake we can but hope that the time may not be far distant when "They shall beat their swords into plowshares, and their spears into pruning-hooks; nation shall not lift up sword against nation, neither shall they learn war anymore," and that just and righteous arbitration will be the method of tranquilizing all national disturbances.

Among our coast defenses thirty-five or forty years ago Key West and Tortugas, Florida, were considered stations of sufficient importance for the establishment of elaborate fortifications.

They were the extreme points reaching out toward the Spanish possessions. In any case they would be useful as depots of supply for our navy; and a fort on one of the keys farthest from the mainland would prevent its occupation by a foreign force.

About the year 1847 Fort Jefferson was commenced under the charge of Captain Wright of the United States Engineer Corps, and in 1859 had assumed a formidable appearance, as it rose, apparently, directly from the sea to a height of nearly sixty feet, and after the towers at each bastion were completed presented a castellated and picturesque appearance.

This great work gave employment to some two or three hundred workmen, mostly slaves, whose masters lived in Key West, sixty miles away. So large a force naturally necessitated a resident physician. Doctor Whitehurst, who had held the appointment for several years, resigned in the summer of this year.

Professor Agassiz had visited Tortugas the preceding winter, returning very enthusiastic over the coral and other marine forms; and those in authority had consented that the succeeding physician should be chosen with reference to biological science.

Professor Baird of the Smithsonian Institution knowing all this and also that my husband combined both qualities of surgeon and naturalist, it was through this influence that the position was tendered him and accepted in the autumn of 1859.

It seems strange to refer to letters that say the trip from New York to Washington was the most tiresome part of the journey, taking from six o'clock at night until six the next morning, with so many changes that the attempt to sleep was only an

aggravation;—when now the comforts and luxury in traveling simply depend upon the length of one's purse.

From there to Charleston the trip was slow but sure,—literally for the accommodation of every one. I remember the train stopping one day in the woods without any apparent cause. After a while people began to question the reason of the delay, when an old couple were seen coming through the woods putting on their wraps as they came. When they were assisted aboard, the train started on as leisurely as though time was of little value; we had evidently left hurry and bustle behind.

While in Charleston, although it impressed us as having a general air of dilapidation,—its moldy walls, uneven sidewalks, and a want of thrift even in the better part of the city,—yet with it all, we felt that the people found more enjoyment in life than we in the North with all our hurry and energy.

Taking the *Isabel*, the Havana steamer, we reached Key West in the evening a few days later, finding the mail schooner *Tortugas* waiting to convey us to Fort Jefferson, or Tortugas; so we saw nothing of the town, only as we steamed into the wharf; yet it gave us a most pleasant impression,—the lights glimmering through the cocoanut trees, the white sand, glimpses of the houses half hidden in the foliage, and the brilliant moonlight throwing a fairy-like glamor over all, making a picture never to be forgotten.

One night took us to Fort Jefferson, that in time became known as the famous Dry Tortugas; and our first view in the early morning as we sailed in through the winding channel was surely suggestive of a prison. Over the top of the fort we caught sight of trees and the roof of a building with a tall, white lighthouse towering over all. The little keys that we had passed, some pure white, others with a few trees and shrubs, took away something of the isolated feeling.

Three miles away stretched out the largest of all these islands except the one on which the fort was built, on which was another larger lighthouse. The exterior of the fort was bare and repulsive, the interior offering a decided contrast.

Here were trees of the deep green belonging to tropical vegetation, so restful to the eye in the glaring sun; and as the walls inclosed about thirteen acres, and water could not be seen, I instinctively lost the feeling of being so far from the mainland.

The walk, hard as cement and white as snow, partly shaded by the evergreen trees, led past the lighthouse and cottage of the keeper to the opposite side of the fort, where we were taken into a large, cool and pleasant house, and given a warm welcome by Captain Woodbury and his charming wife and family, who soon made us feel that a home does not depend upon locality, but in the hearts of people.

It had been very difficult in our hurried departure from home to learn just what was necessary for living in such an out-of-the-way place; and, as we only looked forward to a stay of one winter, we took nothing for housekeeping purposes, thinking we should probably board at some hotel perhaps—suggestive of the idea we had of the Dry Tortugas.

We soon concluded that, however primitive it might be, a home of our own would be preferable, so went shopping at the one store outside the walls. The winds had blown up sand until there was an acre perhaps stretched along the moat outside of the seawall; and on this atom of land was the store, mess-hall for the workmen, carpenter-shop and a long building where the men slept, and farther along on the edge of the sand stood the Engineer Hospital, where it was always cool and breezy.

The store was for the accommodation of the men, and contained a medley of things. Here we bought a stove and enough of the necessities to start our primitive housekeeping.

We had some tables made by the island carpenter, a bedstead, also a rocking-chair, that must be in existence now judging from its strength and durability. There was always a mystery about its rocking power, which my kindly feeling for the carpenter prevented questioning. It was not a frisky piece of furniture that made one feel in danger of tipping over, but tall, staid and dignified, requiring some effort to tilt it. The length of the rockers suggested the long swing of a hammock, so that one started off with anticipations of a restful enjoyment; but these anticipations were soon dispelled by its little tilt forward and very sudden termination in the backward swing, causing the occupant to look around for the obstruction, when, seeing nothing, the impetus would be given again with a little more energy. After several such unsuccessful attempts we came to the conclusion that it was its own peculiar way of rocking; and the mystery was never solved why such a wonderful length of rockers produced so few rocks; but we managed to obtain unqualified comfort from it, and some quiet amusement when strangers attempted it.

We finally began housekeeping with an old colored woman as cook and a boy as waiter. The former was a character, a slave of a Mrs. Fogarty, who kept the mess-hall and who loaned her to me until my cook, a certain Aunt Rachel, could come from her master at Key West.

The latter was evidently held in great veneration by the colored people; and I was considered very fortunate in securing her. She was a famous cook and the wife of Bill King, the cook of the schooner *Tortugas*.

Aunt Eliza was so black that in the dark I could see nothing but the whites of her eyes, under a huge yellow turban, from which two little black braids the size of pipestems stood at right angles behind each ear, from which hung enormous gilt hoops. Her front teeth had long since disappeared; and I found that the strong odor of a pipe, which, she said, came from Jack's smoking in the kitchen, was from her own, which I found in all sorts of improper and inconceivable places.

She stooped so that I asked her the cause, when she replied: "Why, honey, dat's from workin' in de cotton field. I'se so ugly dey couldn't keep me in de house; and after Mr. Phillips [the overseer] bought my gal Clarssy I dun took on so, and was dat bad, my master glad nuf to sell me down yer."

But I said where was your husband? "Oh, I lef him and got Jack." Jack was a good-looking colored boy about thirty, while she confessed to fifty. He was one of the workmen owned in Key West, and lived with Aunt Eliza over our kitchen, which was a separate house with a chamber over it in the rear of the larger one. She showed none of her ugliness to me, but one day I heard an outcry and ran to the dining-room window just in time to see Jack flying out of the back gate, with Aunt Eliza in close pursuit swinging an axe, threatening to "split his head open if he ever came there again."

I called her in to remonstrate, and at first she said she really meant it, but after awhile confessed she did it to frighten him, as he was so lazy he would not wait upon her. "I'se boss, Missus," was her explanation.

For several days she had supreme control of the kitchen, with little Lewis, and smoked her pipe in peace; then she asked me if Jack might come back; she was lonesome. I consented upon the condition that if there were any more disturbances he must stay away entirely.

She evidently wanted to please, and was anxious to remain in my service; yet without being openly disloyal to Aunt Rachel, she never lost an opportunity to give a good reason for her delay in coming.

The fort on the inside showed long stretches on each curtain of arches, making pleasant places for walking, cool and shady; and in the moonlight the effect was really beautiful. Looking

not unlike some grand old ruin with its lights and shadows, one could invest it with all sorts of romance. Cooper laid the scene of "Jack Tier" here, in a cottage by the lighthouse which had given place to the one now standing.

The seawall around the moat was our favorite walk, making nearly a mile. The atmosphere was so clear that the space between the sky and the earth seemed interminable. The sun was dazzling in its brightness.

The wind coming in through the embrasures kept the shiny leaves of the mangrove constantly quivering; and the rattling among the cocoanut branches sounded not unlike gentle rain. Outside the deep blue water was covered with whitecaps, which broke into waves wherever the coral approached the surface.

Such was our winter weather, except when a norther came scurrying over the gulf; then, as the children say, we played that it was cold, and built a fire in one of the big fireplaces, listened to the wind blowing the sand against the windows, and said, "Doesn't that sound like snow?"

The northers lasted three or four days; then we would have another two or three weeks of lovely summer days again, and my husband would spend part of each day collecting specimens. He had built on the water's edge a little house with a wall extending fifteen feet square out into the water, so that it flowed in and out through the interstices; and here he kept all kinds of specimens and watched their growth and development.

It was most interesting even to those who did not claim to be naturalists; and, as all our outside pleasures were necessarily aquatic, one learned without an effort from the familiarity of natural objects; and as our resources were necessarily limited we took advantage of everything that presented itself, and so found amusement and entertainment.

On Sundays Captain Woodbury, who with his family were Episcopalians, read the lessons and afterwards a sermon. Mrs. Woodbury had organized a choir, some among the white workmen, in fact any one who could sing; and everybody was invited to attend the service, oftentimes filling the large parlor.

Rowing and trips to the adjacent keys for shells, especially after a norther, were our frequent pastimes.

The water was so clear we could distinguish objects clearly at the depth of sixty feet; and it was like rowing over a garden when it was calm, to drift along watching the fish darting in and out among the huge heads of coral, and sea-fans that gently waved back and forth in the current.

Often there would be large schools of harmless sharks close in shore. As there were acres of shoal water only a few feet deep, where all this could be seen, and as there were always boats ready we went rowing or sailing as the people on the mainland went to drive.

The event of this first winter was a visit to Key West, which, in its palmiest days, was a lovely place with charming society, though the war cloud changed it utterly and hopelessly later on.

We arrived at night, going to the hotel, but before breakfast the next morning Captain Curtis, to whom we had letters of introduction, came and took us to his lovely home sheltered in a grove of cocoanut trees. It seemed a bit of fairy land, so purely tropical was it with all the luxury and taste of a Northern home. I shall never forget the first impression it made upon me.

We were given the quaintest, cosiest little house they called the cabin to sleep in; it was in the yard, embowered in trees and flowering shrubs, and was really a ship's cabin taken from a wreck, brought there and arranged as a guest-room, or two rooms rather, and a dressing-room, with a little piazza in front.

The very romance of the surroundings kept me awake listening to the gentle sound of the wind among the trees, when to add to all this we were suddenly roused by a serenade of

stringed instruments, sweet and soft, carrying out the fairy idea of it all.

The next day we dined at Fort Taylor, meeting Captain Hunt and Professor Trowbridge. The former was the engineer in charge,—a most agreeable gentleman, full of life and good humor. His wife, who after his sad death became the favorite author "H. H.," was in the North. I remember Captain Hunt took us to ride in a huge carriage drawn by a very small mule that was wise enough to understand that, when the whip dropped through the drawbridge, he was master of the situation; and nothing short of the prods of the Captain's umbrella, after a cane had been sacrificed, would arouse him to a sense of duty; but he carried us safely to all the points of interest.

The following night a party was given us at the fort, where we met many delightful people,—Judge Marvin, Judge Douglass, the officers of the steamship *Corwin*, and a number who were to leave the next day; and as Captain Hunt was to return with us on a visit at Captain Woodbury's, and Judge Douglass and Professor Trowbridge were going to Havana, we were invited to go down on the steamer *Corwin* with them.

My memories of Key West, as it was then, are delightful, standing out clear and bright; every one was happy and contented in their island home.

So many names come into my mind as I write,—Mr. Herrick the rector and his hospitable wife, the Bethels, the Browns, who had the most beautiful home on the island, and many others who showed us many kind attentions.

Judge Douglass was an inimitable story-teller; and it was a merry party that reluctantly separated at eleven, when the steamer reached the entrance of Tortugas harbor on the return, sending us ashore in a cutter in charge of an officer, a son of Bishop Odenheimer of New Jersey.

Captain Hunt remained a week, and Mrs. Woodbury gave a dinner party for him; and, finally, two days before he left, I extended the same hospitality, wondering if he would notice the similarity in china and table equipments, for our "things" were yet *en route;* even the chairs had not reached Key West.

Calling in Sophy Benners, the chief cook of the island, who belonged to the lighthouse keeper, and deposing old Eliza, who looked rather mournful over the downfall, we planned a dinner that must have been a surprise; there were fruits and flowers and borrowed china, even to the chairs, which I feared encountered the guests going into the back door as they entered the front, as the hall passed through from front to rear.

My guests were kind enough to pronounce the dinner a success, and I enjoyed the novelty of the whole thing extremely, perhaps more than I should if my ingenuity had been less taxed.

A few days later Sophy Benners (for the slaves all took the name of their masters) and Peter Philor proposed entering the married state with more than ordinary pomp and splendor. The master, Mr. Philor, lived in Key West, owning a large number of slaves who worked on the fort, there being four Johns alone, the last one always giving his name as "John de fofe, sah," in answer to the overseer's call.

Peter had obtained permission from his master to marry Sophy, and so came to Captain Woodbury to ask if he would marry them. The latter replied, "Certainly, where are you going to be married?"

"In your parlor, sah," said Peter. And we heard that Sophy had given out invitations to this effect:

"Sophy will be agreeable to her friends at seben o'clock in Captain Woodbury's parlor; after dat comes de ball."

Aunt Eliza soon came up to tell me what was going to happen, and I asked her if she was going to the ball.

"Sartinly, ma'am, and I must go and wash my skin, now I'se got de kettle on."

The wedding was an affair to be remembered. All the white people assembeled in the front parlor; and at the supreme moment the folding doors were thrown open, and the bridal party came forward: two bridesmaids all in white, and two groomsmen. The bride wore a white veil with flowers; and she was married with a ring, her mistress giving her away (in theory only).

The boys (all the black men were called boys) had had their hair braided for a week; and some of their heads were large enough to fill a bushel basket.

After the couple were pronounced man and wife they adjourned to the mess-hall, the guests following in about an hour, as every one had been formally invited.

We saw them dance a while; then they passed us cake and wine, and we started to go home, when some one said we ought to stay and see Aunt Eliza dance a jig, and to my amazement my old cook with a young man took the floor. She looked rather shy, saying, "de Lor', I cyant dance;" but the music soon took possession of her poor old feet, and she gradually straightened up, swaying back and forth with the music, evidently forgetting everything else. She danced away until I could scarcely believe that the jubilant figure was the old slave that groaned and grumbled about the little work demanded of her. She outdanced the boy and left him far behind. They are as a race music-loving; and I saw in a dark corner of the ballroom my incorrigible servant Lewis dancing all by himself happy as a king.

We learned that the colored people knew old Eliza's gift and had coaxed her to come and dance a jig, with the promise that one of the boys should do all her scrubbing on Friday; and we certainly came near being flooded the following day. He was as good as his word, as the house shone from top to bottom.

Old Eliza was such a character I cannot refrain from recounting some of her amusing, yet at the time rather perplexing, acts.

The dignity of cook was not easily adjusted, and rather overpowering, but she improved as time went on. In the early days of her new position, installed in a house the same as the cook of the commanding officer, she felt her importance and showed it, not unlike wiser and older people. Such differences vary only in degree; and in her case it was very amusing.

Fresh beef was a luxury only indulged in occasionally; but turtles were kept in the moat and killed whenever we wanted them.

As I was not accustomed to the methods of preparation in vogue on the reef, and not wishing to unnecessarily expose my ignorance, I concluded "that discretion was the better part of valor," and pretended to be very busy in the house, so that on those days Eliza was mistress of the kitchen.

The first time she prepared green turtle a very fine soup was served, followed by what she called turtle balls.

After dinner Eliza asked me how I liked it.

I replied very much, only the next time we would try it without onions.

They had brought me a quantity and I had told her to partly cook what was left, to be sure that it would keep.

The following forenoon she came upstairs and said, "What shall we hab for dinner, Missis?"

"Why, the turtle balls that were left yesterday," I replied, "and whatever vegetables we can get, with a pineapple tart."

She looked at me with a queer expression, finally bursting into an embarrassed laugh, and said: "De Lor', de Lor', how funny. Yo' 'spect to hab dem balls for dinner, and I and Jack and Lewis dun eat 'em all up las' night. De Lor', de Lor', I eat five, like to kill me, and Jack say he neber eat sech balls on dis yer key fore."

"But," I said, "you told me you did not like them, never ate them, and I gave you bacon for your dinner."

I suppose she saw a look of dismay on my face, for she stopped laughing and said:

"I'se sorry, Missis; I tout you didn't like 'em wid de onions, so we dun eat um. De Lor', want dey good."

"Well," I said, as a dinner without meat seemed to be the prospect, "make an ochre soup and we will do without fresh meat to-day," and she left me, as I thought, with rather a woe begone expression.

When the soup was served at dinner, the ochre was certainly not in sufficient quantity to warrant its name, and I said, "Why didn't you put in more ochre?"

"Why," she replied, with a toss of her head that endangered the foundation of the yellow turban, "want time, Miss, want time, guess ise made soup afore."

"But," I said, "it would not take any longer to cook all you had than a few."

Seeing there was no help for it, the confession very awkwardly followed, that they had eaten the ochres too.

I then learned that I must treat her like a child, giving her what she was to have, and telling her what to serve us.

I had learned that planning one's meals at the Dry Tortugas depended, in a great measure, upon one's wits and ingenuity.

The plan was to bring us fresh beef from the mainland once a month; but the best of intentions fail sometimes, and our supply was no exception to that rule.

Time sped very rapidly notwithstanding our necessarily monotonous life, the greatest events of interest consisting in our mails; and the delight with which we hailed the sight of the mail schooner *Tortugas* over the top of the fort when we looked out in the morning never abated.

No orders of removal had yet arrived for Captain Woodbury, although they had spent their four years there, so they decided to go North for the summer.

Our intercourse had been so delightful that the prospect of living there without them was appalling; for my husband had become so interested in his scientific labors he had planned to remain another year. Our household goods had arrived from the North some time before, so that the home began to look cheerful; yet Mrs. Woodbury's piano and large family nearly always attracted us there in the evenings.

The mornings were devoted to lessons for the young folks, but the afternoons invariably found us on the water or wandering over some of the adjacent keys, where the boys became apt pupils in the study of natural objects.

Our evenings after the little folks were asleep we spent together, reading aloud or with music and conversation; and the peaceful happy life we led I think was often, by all of us, looked back upon in the sorrowful years that followed, if not with longing, with great pleasure.

They were sad days before and after Captain Woodbury's family left, for it took some time to adjust ourselves to the loneliness that followed; and I never shall forget the peculiar sensation with which I watched the schooner *Tortugas* float away with them all one bright moonlight night, leaving us almost alone upon this sand bank on the borders of the great Gulf Stream.

(*To be continued.*)

THOUGHTS OF THE POPPY-FIELDS.

By Grace Ellery Channing.

I KNOW how just this morning light will trace
Each golden face;
And how this self-same beam strike boldly up
Each glittering cup!
And how this breeze lift the wide quivering sea
Up bodily,
And then in golden waves on the broad plain
Let fall again!
The mountains will be palest amethyst
Through a purple mist.
The valley will be blossoming white and pink,
More than I think!
Almonds and peaches will have decked their hair
With garlands rare;
And birds will be on every blossomed bough,
Caroling now;
Now will the lark his dropping music fling,—
I'm listening! —
Heaven will stretch down two tender arms, and earth
Laugh low for mirth!
And where there was desire will be peace,
And then increase
The summer long of heaven upon earth,
And new heaven's birth,
And songful silences and silent song
The summer long!
But just to-day all that joy will be holden
In poppies golden.
It will be brimming o'er their cups aglow
In a way I know,
And shining up the mountains goldenly
In mists,—Ah me!
I've seen it,—and I shall not see for years!
These are the mists—not tears!

THE OREGON NATIONAL GUARD.

THE FIRST REGIMENT.

By Harry L. Wells.

MUCH interest is felt in National Guard circles everywhere in the proposed mobilization and grand encampment of all the State troops in the country in Chicago in 1893, as a feature of the World's Columbian Exposition. We have in the United States about one hundred and five thousand men, regularly enlisted into the service of the various States, and organized into regiments, brigades and divisions.

In numbers this is an army of respectable proportions, and were it properly equipped for field service, well officered and thoroughly instructed in field maneuvers and camp duty, would be a strong arm upon which the Nation could rely in time of need; but its condition and probable efficiency in an emergency are unknown quantities. No man is competent to speak of either its merits or defects; for there has been no opportunity to fully investigate either. That the guard of some States is better organized and equipped than others, has had more practical instruction, is well known; but the general merits of the entire body, and what it could accomplish as a whole, are yet to be ascertained. It is for the purpose of learning this and of discovering what is necessary to be done to perfect the National Guard system and make the organization more efficient, that the mobilization proposed is chiefly desirable and would be of benefit to the nation. The country can well afford the cost of acquiring such important information and reaping the benefits that must flow from it.

In view of this probable assembly of citizen soldiery, the question naturally arises on the Pacific Coast of how its National Guard will compare with the troops from older and more populous States. In the States immediately bordering the ocean there are about six thousand troops, of which California has thirty-five hundred, Oregon fifteen hundred and Washington one thousand. Of these Oregon is maintaining the greatest number in proportion to its population. California spends the most money per man, and Oregon the least, in equipping and maintaining the service. California troops have the most complete equipment, and Oregon the most defective, as a whole, as would naturally be expected in view of the comparative cost of maintaining the service in the three States mentioned; yet all of them require considerable addition to their equipment before they can pass the inspection proposed to be given them in Chicago, and be pronounced prepared for campaign duty. Yet, notwithstanding this, in looking over the three States to find the regiment the best able to represent them in the comparison that will inevitably be made between the troops of the Pacific Coast and those of such States as New York, Pennsylvania and Massachusetts, it will be found that the choice must rest upon the First Regiment of Oregon. In drill, discipline and general effectiveness, this regiment stands at the head of the National Guard of the Pacific Coast. In the high character of its rank and file, and the superior qualifications of its line and field officers, this regiment is peculiarly fortunate; and to these is due its high state of discipline and drill.

The First Regiment of Oregon was organized in Portland in 1886, as the successor of a previous crude battalion organization; but it was not until the following year that a proper military law was passed, and a tax levied for the support of the service. It was then

that the troops ceased to be "Malishy," and became a regularly organized National Guard. The regiment now consists of six companies, occupying a superb armory in Portland, and two companies in different towns a few miles distant; but the remarks upon its drill and discipline are based upon the six urban companies, which, occupying rooms in the same armory, using the same excellent drill-hall, and meeting together frequently in battalion drill, vie with each other in striving for excellence in all that pertains to the soldier individually and to a company as a military organization. It was of them that President Harrison remarked, when they marched before him in review like veterans, with the rain pouring down upon them in torrents and the mud covering their feet, their eyes straight to the front and their lines perfectly dressed, that it was the finest body of troops he had seen during his entire tour of the country. Not only upon this occasion, but upon many others, military men of high rank and long army experience have paid the regiment the highest compliments upon its appearance and condition.

The armory in Portland is the finest and largest west of Chicago. It was built by the county of Multnomah at a cost of $90,000 for the structure alone, and was furnished and equipped for use by the regiment itself at a cost of nearly $10,000 more. It is a massive stone and brick edifice, two stories high, covering an entire block of ground 200 feet square. The windows are protected by iron bars, and provision is made for defense of the walls by bastions on the corners, with port holes, or embrasures, commanding all four sides. The south half is the administrative portion, in which are the headquarters rooms, field and staff room, non-commissioned staff room, band room, quartermaster's room, library, board of officers' room and a room for each company. Through its center runs a wide assembly hall, upon the walls of which are the gun-racks, with each piece numbered and in its place, and the racks securely locked. All rooms are suitably and beautifully furnished, but the company rooms are especially so.

The walls are tastefully and expressively decorated, the furniture is elegant, the lockers are finely finished in walnut, mahogany, oak, etc., each room having a different tone and finish. Pictures, statuettes, busts, pianos, library cases, center tables, rugs, etc., give the rooms a most attractive appearance. The second floor consists of one large room 100 x 200 feet, with a truss roof, which was formerly used as a drill-hall, but will soon be equipped with gymnastic apparatus.

The north half of the armory consists of one large drill hall 100 x 200 feet, two stories high, with a truss roof and skylight, and equipped with electric lights. The floor is solid asphaltum. Surrounding it is a gallery capable of seating comfortably one thousand people, with a bandstand at the east end. In this room are held the company and battalion drills and the athletic games given frequently by the regimental athletic club. In the foundation of this portion is a brick and stone tunnel 200 feet long, equipped as a rifle range at a cost of $7,000, where regular indoor rifle practice is had.

The target is reduced to represent the regulation target at 200 yards, and reduced ammunition, carefully calculated for the distance, is used. The range is perfect in all its features. In addition to this the regiment has a fine outdoor range at Riverside, four miles from the city, on the bank of the Willamette River.

Battery A, O. N. G., occupies the rear end of the south half of the armory, and uses the large hall for drill saturday nights. The battery has two field pieces and two gatling guns, and is under the able command of Capt. E. L. Anderson, an artillery officer of experience in the Civil War.

Capt. Anderson has had command but a few months, but the improve-

Armory First Regiment, Oregon National Guard.

ment in the battery is very marked. His subordinate officers are Senior First Lieut. George Thing, Junior First Lieut. William Iliff, Second Lieut. H. W. Williams.

Although occupying quarters in the armory, the battery is not officially attached to the regiment, but reports direct to brigade headquarters. Entrance to the battery's quarters is had through the large door on the side, shown in the engraving. The locker and meeting room of the battery is handsomely furnished. This is the only battery in the State service.

The regiment is hard at work upon the new drill regulations, and hopes soon to reach as high a state of perfection in battalion drill and the movements in extended order as it has attained in the Upton tactics. That it will do this, if the present officers remain in command, can not be doubted; for they are all able instructors and capable of speedily mastering the details of the new regulations. The present aim of the organization is to go to Chicago in 1893 with full ranks and a perfection of drill that will reflect credit upon the National Guard of the Pacific Coast when compared with that of any State in the Union. The companies occupying the armory are A, C, E, G, I and K.

Company A is the oldest militia organization in the State now in existence. It dates back to the troublous times of the Civil War, and has had upon its rolls many of the leading business men of the city. It is the only survivor of the old "Malishy," but resembles its former self in nothing, being now a worthy member of the National Guard. Its officers are Capt. F. D. Kelsey, First Lieut. J. C. Rutenic, Second Lieut. H. C. Spear.

Company C has been organized a little more than two years, and is the youngest of the Portland companies. It is a well-drilled and enthusiastic company. Its officers are Capt. J. H. Porter, Second Lieut. Chas. Hand.

Company E was originally organized by the Grand Army posts about ten years ago, but for a number of years has been in no way connected with that organization. Its membership is similar to that of the others. Company E excels in target practice, and holds the regimental championship, its captain also holding the State badge for individual competition. Its officers are Capt. E. W. Moore, First Lieut. J. T. Moore, Second Lieut. C. C. Merton.

Company G was organized eight years ago, and was the first company in the State to set a high standard of drill, discipline and individual excellence. It has won several competitive drills from well-drilled companies, and not only has never been defeated but has issued an open challenge to any National Guard company on the Coast. It also excels in athletics, and in every way is a model military organization. Its officers are Capt. L. C. Farrar, First Lieut. G. T. Willett, Second Lieut. J. W. Newkirk.

Company I was originally organized in the High School four years ago. It has always been filled with enthusiasm, and is a splendidly drilled organization. Its members now average of older age than at first, and it has ceased to be the "kid company," and is as solid and substantial as could be wished. It stands ready to compete with any company on the Coast. Its officers are Capt. J. C. Coffee, First Lieut. R. K. Lee, Second Lieut. F. E. Coogur.

Company K was born in the troublous times of the spring of 1886, when violence was threatened to the Chinese. It was mustered in for ninety days, and contained the most prominent of the younger business and professional men of the city. At the expiration of its term of ninety days it veteranized and became a permanent organization. But two of the original members now remain, the captain and second lieutenant, but the standard of membership has been well preserved. The officers are Capt. Harry L. Wells, First Lieut. T. N. Strong, Second Lieut. C. K. Cranston.

In its field and staff the regiment is peculiarly fortunate in having officers of great ability and zeal. Col. Chas. F. Beebe, the commandant, has no superior as an executive officer, disciplinarian and drill instructor in the entire National Guard of the United States; and chiefly from him come the impulse and influence that have raised the regiment to its high state of efficiency. Added to zeal and a strong military instinct, he has the advantage of a course of instruction in the Seventh Regiment, N. G. S. N. Y., and experience as a staff officer and inspector in the New York service. He is now temporarily in command of the brigade, while the regiment is under the command of Lieut.-Col. O. Summers. Col. Summers is a veteran of the war, is Department Commander of the G. A. R. of Oregon, and is an able and devoted officer. Major B. B. Tuttle is a graduate of the cavalry service of the war, in which he rose to the rank of captain, and was with Sheridan in the Shenandoah. The staff consists of First Lieut. Geo. F. Telfer, a model adjutant; Capt. H. F. Stevens, surgeon; Capt. A. J. Brown, chaplain; First Lieut. C. E. Macrum, assist. surgeon; First Lieut. E. Bernheim, quartermaster; First Lieut. E. W. Leland, commissary; First Lieut. D. J. Moore, signal officer; First Lieut. L. C. Jones, inspector of small arms practice; First Lieut. W. F. McCaw, engineer officer, who was the architect of the armory.

Each company drills regularly one night each week, and as much oftener as it may desire. Tuesday is headquarters' night, when the staff and non-commissioned staff are busy transacting official business. Besides this, schools of instruction and squad drills give the armory a lively appearance every night. Battalion drills are frequent in the spring, the company work not being interfered with any more than necessary during the fall and winter. This enables the companies to get themselves into good condition after the summer vacation, drill up their recruits, and be thoroughly prepared for battalion drill when that branch of instruction is undertaken. This system has given the most gratifying results, the regiment thus being evenly developed from the foundation upward. In learning the new regulations, company and regimental schools for officers and non-commissioned officers will precede battalion instruction; so that both officers and guides will be thoroughly competent to perform their duties when battalion evolutions are undertaken, and perfection in battalion drill will be easily acquired.

THE VOYAGE OF CABRILLO.

[Some years ago a collection of papers was found in one of the libraries of Madrid that proved to be the diary of the discoveries of Cabrillo kept by his pilot Ferrel, in the famous voyage along the California coast in 1542, in which the natives of California were first seen and described by white men. The book was translated for this Government by Mr. Richard Stuart Evans, the title of the volume being, "Coleccion de various documentos, para la historia de la Florida y tierras adyacentes (Tomo I.), en la casa de Trübner y Compañia, Núm.— Paternoster Row, Londres." The following is the literal translation as given in the report of the geographical survey, and is of great interest, as it mentions and describes many of the locations, as Santa Barbara, San Diego and others that are now flourishing American cities, which then were the homes of unnumbered tribes.]

JUAN Rodriguez set out from the port of Navidad [a port on the Mexican coast about 315 miles north of Acapulco] to discover the coast of New Spain on the 27th day of June, 1542.

He was delayed from the port of Navidad to Cape Corriente a day and a night, 40 leagues, with a southeast wind.

From Wednesday to the following Thursday they held their course along the coast 35 leagues.

Sunday, the 2d day of July, they had sight of California; they were delayed in crossing over by the weather, which was not very favorable, almost four days; they anchored the following Monday, on the third of the same, off the Point of California, and were here two days, and from this place they reached the port of San Lucas [San Lucas Bay] the following Thursday, and took in water; they saw these days no Indian; they say that this port is in 23 degrees, and from the point to the port it is clear and soundable, and the land is bare and rugged [as at present].

They departed from the port of San Lucas Thursday, in the night, and the following Saturday, on the eighth of the said month, they cast anchor on the Point of Trinidad [Cape Tosco], which is in 25 degrees; it is from San Lucas 5 [doubtless intended for 35, the actual distance] leagues; it is a clean coast, without any deviation; within, on the land, appear high and bare and rugged ridges [a description which applies to this day]; they were at anchor here on account of contrary winds from west-northwest until the following Wednesday.

Wednesday, the twelfth day of said month, they departed from this place. In Puerto de le Trinidad [Santa Marina Bay, which adjoins on the south Magdalena and Almejas bays], an island [Margarita Island] forms the port which is here, and it is a good port, sheltered from the west-northwest winds. The port of the island is at the head of the island on the southeast side, and the port is clear and soundable; it has not water nor wood [nor has it now]. The island has 10 leagues of length and 2 leagues of breadth; they anchored that night.

They departed the Thursday following, and passed by Puerto de San Pedro [Magdalena Bay], which is in 25½ degrees. In this port there is no water nor wood; its direction is southeast [and northwest]; it had a good shelter from the west winds. They continued sailing along the coast, which forms a large creek, the head of which is in 26 degrees [creek indicated on present maps, but without name]; the land is low and covered with sandbanks, the coast white and clear [as at present]. They proceeded sailing along this coast with fair winds as far as 27 degrees, and Wednesday, the nineteenth of the said month, they landed at a port which they found, and going on shore they found a path used by Indians and followed it the distance of an arquebuse shot, where they found a fountain of water; the land is level within and bare and very dry; they gave it the name of Puerto de la Mada-

lena [Pequeña Bay]; it is 40 leagues from the Bay of San Martin to this port.

The following Thursday, on the twentieth of the said month, they departed from this port and proceeded, sailing along the coast with bad winds; and about 6 leagues from that place they found an anchorage behind a point, which they called Punta de Santa Catalina [noted, but not named, on present maps]; and so they continued sailing along the coast. And the Tuesday following, on the 25th of the said month of July, they discovered a large bay in 27½ degrees. They made very little progress these days on account of the bad weather. They cast anchor in this port and gave it the name of Puerto de Santiago [Abreojos Bay]; it is distant from Puerto de Madalena 23 leagues. There are from Punta de Santiago for 5 leagues some very dangerous shoals and rocks, and they do not appear except when the sea breaks upon them [the present condition]; they are 1 league from the land and in a little over 27½ degrees; they are called Habre Ojo (Look Out) [Abreojos Shoals]. They proceeded, sailing on the same course along the coast as far as 28 degrees, and there anchored under shelter of a point [Hipolito Point, except the island. The close correspondence of the distances attests the correctness of this location. The island mentioned has doubtless been washed away, and a shoal is all that at present remains.] Here are groves of trees which they did not see from the Point of California; it is from this point to Puerto de Santiago at the northwest point 23 leagues. [Without doubt an error. From the distance given it would appear as though San Pedro Vincula (Port San Bartolome) was intended.] There are high and broken ridges with some woodland. We gave it the name of Santa Ana [anchorage behind Hipolito Point]; it has a little island about 1 league from the land.

Thursday, on the twenty-seventh of the same month, they departed from said Puerto de Santa Ana and cast anchor about 6 leagues from that place in a port which they named Puerto Fondo [bay east of Asuncion Island] on account of the great depth which it had, as near the land it had 30 fathoms; it is clear; and they departed the following day from the said port, and turned back three times to the said port with contrary winds; and they were in the said port until the following Monday.

Monday, the thirty-first of the same month, they departed from the said Puerto Fondo and anchored about 8 leagues thence that night, and the next day departed on their voyage.

Tuesday, the 1st day of August, they left that place, and they proceeded about 10 leagues [actually 13], where they anchored in a port to which they gave the name of San Pedro Vincula [Port San Bartolome]; this port is in sight of the Isle of Zedros (cedars). [Probably intended for Cedros; now known as Cerros Island. It was discovered by Ulboa and named Isla de Cedros,—not Cerros (hills). See Burney, vol. II, pp. 243, 244.] This port is in 28½ long degrees (a little over 28½ degrees); the land is high and rugged and bare. From California to this place we have seen no Indian.

Wednesday, on the second of the said month, they departed from this port; and the wind was contrary, and they proceeded beating. They cast anchor at an island which is 4 leagues [actually 3] distant from the southeast side of the island of Zedros; and they named this island San Esteban [Natividad]. With the extremity of the point of the mainland running east and west, the coast is northwest and southeast; it is a league from the mainland. From this point [Point Eugenio] the mainland turns the coast towards the northeast and makes a large creek, so that the land does not appear. Between the island and the mainland there is a good channel; and they had to pass close to the island, for there are shoals which extend in a

ridge from the point for a quarter of a league. There is much vegetation on the water which grows from the bottom and is tangled beneath the surface [kelp]. This island [*i. e.*, Natividad] runs with San Pedro Vincula northwest and southeast; this island has 3 leagues in compass. We were at this island with the wind contrary until the following Saturday, the 5th of the said month of August. It has a good port on the side of the southeast. There is much fishing with a hook, and many birds are found.

They departed from the island of San Esteban Saturday, the 5th of August, and anchored at the island of Zedros [Cerros Island], where they remained until Thursday, the tenth of the said month, taking in water and wood. They found no Indians, although they found some sign of them. The leeward point of this island on the south side is in 29 degrees; and it has on this south side good ports and water and wood; and it is on this part bare, as it has only some small shrubs [so at present]. The island is large and high and bare, and runs almost east and west [at present north and south], and is on this side of the south 12 leagues in length [the island is much smaller than is here given].

They departed from the island of Zedros on Thursday, the 10th day of the said month of August, to pursue their voyage, and proceeded on the side of the mainland, sailing to the north. They went this day about 10 leagues, and the following Friday cast anchor in a port which they called Puerto de Santa Clara [Playa Maria Bay]; it is a good port. They landed and found four Indians, who fled. This port is in 30 degrees scant; it runs with the island of Zedros northeast and southwest; and this coast runs from the port towards the creek north-northwest and south-southeast. The coast is clean and soundable; the land is bare and and is not rugged. It has plains and valleys. They were in this port until Sunday, the 13th of the said month, on account of foul winds.

Sunday, the thirteenth of the said month, they departed from this port and went sailing along the coast with slack winds, anchoring each night; and the following Tuesday they cast anchor on a point which forms an inlet, which is in 30½ degrees; it affords very little shelter; they called it Punta del Mal Abrigo (Point of Bad Protection) [Point Canoas].

The Wednesday following they were sailing along the coast and had a heavy northwest wind, which was contrary; and they lay by at night without making any progress; and the following Thursday they held on with heavy rains and adverse winds and calms, so that they made no headway; and this following night they had much wind from the west-northwest, and lay by. The following Friday they proceeded with fair winds, and they found themselves to windward of the Point of Mal Abrigo 6 leagues; and so they held on until the following Saturday, the nineteenth of the said month, when they cast anchor off a small island which is half a league from the mainland. It may be 10 leagues from the Point of Mal Abrigo; it is in 30½ degrees; it has good anchorage and good shelter; they called it San Bernardo [Geronimo Island]; it extends one league north and south [actually one mile]. The coast of the mainland runs north-northwest and south-southeast and is a clean coast. The land within is of very good appearance and level; and there are good valleys and some trees, and the rest is bare. They did not find these days a sign of Indians.

Sunday, the 20th of said month of August, they departed from the island of San Bernardo and approached Punta del Engaño (Point Deception), which is 7 leagues from this island, which point is in 31 degrees. [This point noted, but no name on present Coast Survey charts.]

The coast of the point toward the island runs north-northwest, south-southeast. On Punta del Engaño the

land is not high, and appears in itself a good and level land. The ridges are bare. We saw no sign of Indians; and so they continued sailing until the next Monday, following the coast to the north and the northeast; and about 10 leagues from Punta del Engaño they discovered a good port, in which they anchored and took in water and wood. It is in 31½ degrees. It is a port suitable for making some repairs for the ships, placing them under the mountain.

The following Tuesday the captain, Juan Rodriguez Cabrillo, went on shore and took possession of it in the name of his Majesty and of the most illustrious Señor D. Antonio de Mendoza, and gave it the name of Puerto de la Posesion [Port St. Quentin]. He found a lake which has three large* ——; and they found some Indian fishermen, who immediately fled. They took one of them, and giving him certain presents they released him, and he went off. The land in the interior is high and rugged and has good valleys, and appears to be a good country, although it is bare. They were on shore here until Sunday, the twenty-seventh of said month, repairina the sails and obtaining a supply of water; and Thursday they saw certain smokes and went there with the boat and found about thirty Indian fishermen, who were peaceable; and they brought to the ship a boy and two Indian women, to whom they gave clothing and presents and let them go; —from whom they could understand nothing by signs.

The following Friday, going to take in water, they found at the watering-place certain Indians who were peaceable, and these showed them a pond of water and a salt pit which contained much; and they said by signs that they had not their habitation there, but in the interior, and that there were many people. This same day in the evening five Indians came to the shore, whom they brought to the ships; and they appeared intelligent Indians; and entering in the ship they took note of the Spaniards who were there and counted them, and made signs that they had seen other men like them who had beards, and who brought dogs and crossbows and swords. The Indians came anointed with a white bitumen on the thighs and body and arms; and they had the bitumen applied in the manner of slashes, so that they appeared like men in slashed doublets and hose; and they made signs that five days' journey thence were the Spaniards. And they made signs that there were many Indians, and that they had much maize and many parrots. They came covered with deerskins, and some had the deerskins dressed in the manner in which the Mexicans dress the skins which they carry in the cutters. It is an advanced and well-disposed people. They carry bows and arrows like those of New Spain, the arrows tipped with flints. The captain gave them a letter, which they should carry to the Spaniards who they said were in the interior.

They departed from this Puerto de la Posesion Sunday, the 27th of the said month of August, and sailing on their course found an island 2 leagues from the mainland; it is uninhabited; there is a good port in it; they gave it the name of San Agustin [St. Martin]; it contains 2 leagues in circumference; and so they held on along the coast with slack winds, plying to windward until the following Wednesday, the thirtieth day of said month, which gave them much wind from the northwest, which made them put into the island of San Agustin. In this island they found some sign of people and two cow-horns, and very large trees which the sea had cast there, which had more than sixty feet in length, and were of such thickness that two men could not clasp one of them; these appeared to be cypresses, and there were cedars. There was a large quantity of this wood; it contains nothing else. If a good port, it

*An equal blank in the original. Reference probably made to "three large" villages.

is not a valuable island; they were in this island until the following Sunday.

On Sunday, the 3d day of the month of September, they departed from the said island of St. Agustin and proceeded, sailing on their course; and the following Monday they cast anchor about 7 leagues distant on the weather shore, on a coast running north and south; and immediately they set sail and held on their course with fair and light winds on a coast running north and south until Thursday, the 7th day of the said month of September, when they cast anchor in a creek which the land forms [Todos Santos Bay]; and here ends the coast, which runs north and south and turns to the northwest. On this creek there is a large valley; and the land is level on the coast; and within are high ridges and rugged land good in appearance. All the coast is bold and with a smooth bottom, as at half a league from land they were at anchor in 10 fathoms; here there is much vegetation on the water [kelp].

On the Friday following, on the 8th of the said month, they held on with slack winds, plying to windward; and they found here contrary currents. They cast anchor at a point which forms a cape, and affords a good shelter from the west-northwest; they gave it the name of Cabo de San Martin [apparently no name for this cape at present]; there is an edge of land on both sides; here some high sierras which come behind throw out spurs and begin other small sierras. There is a large valley and many others; in appearance it is good land; it is in 32½ degrees, and is a clean port and soundable; it runs with the island of San Agustin north and south.

Being at this Cabo de San Martin they went on shore for water, and found a small lagoon with sweet water, where they procured water; and at this watering-place came forty Indians with their bows and arrows; they could not understand each other; they came naked; they brought roasted agaves to eat [probably either Agave Shawii or Yucca Whipplei, both being indigenous to this region] and fish; it is an advanced race. Here they took possession; they were at this cape until the following Monday.

Monday, on the eighth of the said month, they departed from Cabo de San Martin and sailed about 4 leagues on a coast running from north-northeast to south-southwest; and thence the coast turns to the northwest. The land is lofty and bare; and the day following they sailed also with foul winds about 4 leagues on a coast running from northwest to southeast. On the land there are high and broken sierras; and the following Thursday they cast anchor at about 3 leagues in advance at a point which projects into the sea, which forms a cape on both sides; they called it Cabo de la Cruz; it is in 33 degrees; there is no water nor wood, nor did they find any signs of Indians.

Having departed from Cabo de la Cruz, they found themselves the following Saturday 2 leagues from Cabo de la Cruz on account of the foul winds on a coast from north-northwest to south-southeast; and on shore they saw Indians in some very small canoes. The land is very lofty and bare and dry. All the land from the extremity of California to this place is sandy like the sea-beach. Here begins land of another character, as it is a country of beautiful vegetation and better appearance, like orchards.

Sunday, on the seventeenth of the said month, they set sail to pursue their voyage; and about 6 leagues from Cabo de la Cruz they found a good port well inclosed; and to arrive there they passed by a small island which is near the mainland. In this port they obtained water in a little pond of rain-water; and there are groves resembling silk-cotton trees, except that it is a hard wood. They found thick and tall trees which the sea brought ashore. This port was called San Mateo [San Diego Bay]. It is a good country in appearance. There are large cabins, and the herbage like that of Spain,

and the land is high and rugged. They saw herds of animals like flocks of sheep, which went together by the hundred or more, which resembled in appearance and movement Peruvian sheep, and with long wool. They have small horns of a span in length and as thick as the thumb, and the tail is broad and round and of the length of a palm. It is in 33⅓ degrees. They took possession of it. They were in this port until the following Saturday.

Saturday, the twenty-third of the said month, they departed from the said port of San Mateo, and sailed along the coast until the following Monday, in which time they made about 18 leagues. They saw very beautiful valleys and groves, and a country flat and rough, and they did not see Indians.

On the Tuesday and Wednesday following they sailed along the coast about 8 leagues, and passed by some three uninhabited islands. One of them is larger than the others, and extends 2 entire leagues, and forms a shelter from the west winds. They are 3 leagues from the mainland; they are in 34 degrees. This day they saw on land great signal smokes. It is a good land in appearance, and there are great valleys, and in the interior there are high ridges. They called them Las Islas Desiertas (the Desert Isles.)

The Thursday following they proceeded about 6 leagues by a coast running north-northwest and discovered a port inclosed and very good, to which they gave the name of San Miguel [San Pedro Bay]. It is in 34⅓ degrees; and after anchoring in it they went on shore, which had people, three of whom remained and all the others fled. To these they gave some presents; and they said by signs that in the interior had passed people like the Spaniards. They manifested much fear. This same day at night they went on shore from the ships to fish with a net; and it appears that there were here some Indians, and they began to discharge arrows and wounded three men.

The next day in the morning they entered further within the port, which is large, with the boat, and brought away two boys, who understood nothing by signs; and they gave them both shirts and immediately sent them away.

And the following day in the morning there came to the ship three large Indians; and by signs they said that there were traveling in the interior men like us, with beards, and clothed and armed like those of the ships; and they made signs that they carried crossbows and swords, and made gestures with the right arm as if they were throwing lances, and went running in a posture as if riding on horseback, and made signs that they killed many of the native Indians, and that for this they were afraid. This people are well disposed and advanced; they go covered with the skins of animals. Being in this port there passed a very great tempest; but on account of the port's being good they suffered nothing. It was a violent storm from the west-southwest and south-southwest. This is the first storm which they have experienced. They were in this port until the following Tuesday. Here Christians were called Guacamal.

The following Tuesday, on the 3d day of the month of October, they departed from this port of San Miguel; and Wednesday and Thursday and Friday they proceeded on their course about eighteen leagues along the coast, on which they saw many valleys and much level ground and many large smokes, and, in the interior, sierras. They were at dusk near some islands, which are about seven leagues from the mainland; and because the wind was becalmed they could not reach them this night.

Saturday, the 7th day of the month of October, they arrived at the islands at daybreak, which they named San Salvador [Santa Cruz] and La Vittoria [Anacapa], and they anchored off one of them; and they went with the

boat on shore to see if there were people there; and as the boat came near there issued a great quantity of Indians from among the bushes and grass, yelling and dancing and making signs that they should come ashore; and they saw that the women were running away; and from the boats they made signs that they should have no fear; and immediately they assumed confidence and laid on the ground their bows and arrows; and they launched a good canoe in the water, which held eight or ten Indians, and they came to the ships. They gave them beads and little presents, with which they were delighted, and they presently went away. The Spaniards afterwards went ashore and were very secure, they and the Indian women and all. Here an old Indian made signs to them that on the mainland men were journeying, clothed and with beards like the Spaniards. They were in this island only until noon.

The following Sunday, on the eighth of the said month, they came near the mainland in a great bay, which they named La Bahia de los Fumos [Bahia Ona Bay; recently named Monica Bay] on account of the numerous smokes which they saw upon it. Here they held intercourse with some Indians, whom they took in a canoe, who made signs that towards the north there were Spaniards like them. This bay is in 35 degrees; and it is a good port; and the country is good, with many valleys and plains and trees.

The following Monday, on the 9th day of the said month of October, they departed from La Bahia de los Fumos, and proceeded this day about 6 leagues, and anchored in a large inlet [laguna near Point Mugu]; and they passed on thence the following day, Tuesday, and proceeded about 8 leagues on a coast northwest and southeast; and we saw on the land a village of Indians near the sea and the houses large in the manner of those of New Spain; and they anchored in front of a very large valley on the coast. Here came to the ships many very good canoes, which held in each one twelve or thirteen Indians; and they gave them notice of Christians who were journeying in the interior. The coast is from northwest to southeast. Here they gave them some presents, with which they were much pleased. They made signs that in seven days they could go where the Spaniards were traveling; and Juan Rodriguez was determined to send two Spaniards to the interior. They also made signs that there was a great river. With these Indians they sent a letter at a venture to the Christians. They gave name to this village of el Pueblo de las Canoas (the Village of Canoes). [Near Buenaventura. "Pueblo de las Canoas" has usually been identified with Santa Barbara, but the distance places it below that point, while the beautiful valley described certainly does not apply to the location of Santa Barbara, which can scarcely be said to be in a valley at all. The Santa Clara Valley and mountains agree exactly with the description.] They go covered with some skins of animals; they are fishers and eat the fish raw; they also eat agaves. This village is in 35⅓ degrees. The country within is a very beautiful valley; and they made signs that there was in that valley much maize and much food. There appear within this valley some sierras very high, and the land is very rugged. They call the Christians Taquimine. Here they took possession; here they remained until Friday, the thirteenth day of the said month.

Friday, the 13th day of the said month of October, they departed from Pueblo de las Canoas on their voyage, and proceeded this day 6 or 7 leagues, and passed two large islands which extend 4 leagues each one, and are 4 leagues from the continent. They are uninhabited, because there is no water in them [the account is doubtless in error here; these islands must be identical with others mentioned farther on as inhabited]; and they have good ports.

The coast of the mainland runs west-northwest; the country is level, with many cabins and trees; and the following Saturday they continued on their course, and proceeded 2 leagues, no more; and they anchored opposite a valley very beautiful and very populous, the land being level with many trees. Here came canoes with fish to barter; they remained great friends.

And the Sunday following, the fifteenth day of the said month, they held on their voyage along the coast about 10 leagues; and there were always many canoes, for all the coast is very populous; and many Indians were continually coming aboard the ships; and they pointed out to us the villages and named them by their names, which are Xucu, Bis, Sopono, Alloc, Xabaagua, Xotococ, Potoltuc, Nacbuc, Quelqueme, Misinagua, Misesopano, Elquis, Coloc, Mugu, Xagua, Anacbuc, Partocac, Susuquey, Quanmu, Gua, Asimu, Aguin, Casalic, Tucumu, Incpupu. All these villages extend from the first, Pueblo de las Canoas, which is called Xucu, as far as this place; they are in a very good country, with very good plains and many trees and cabins; they go clothed with skins; they said that inland there were many towns, and much maize at three days' distance; they call the maize oep; and also that there were many cows. They call the cows cae; they also gave us notice of some people with beards and clothed. They passed this day along the shore of a large island which is 15 leagues in length; and they said that it was very populous, and that it contained the following villages: Niquipos, Maxul, Xugua, Nitel, Macamo, Nimitopal. They named the island San Lucas [Santa Rosa]; it is from this place to Pueblo de las Canoas 18 leagues; the island is from the continent 6 leagues.

Monday, the sixteenth day of the said month, sailing along the coast they proceeded 4 leagues, and anchored in the evening opposite two villages [Dos Pueblos]; and also this day canoes were continually coming to the ships; and they made signs that further on there were canoes much larger.

The Tuesday following, the seventeenth day of the said month, they proceeded 3 leagues with fair weather; and there were with the ship from daybreak many canoes; and the Captain continually gave them many presents; and all this coast where they have passed is very populous; they brought them a large quantity of fresh sardines very good; they say that inland there are many villages and much food; these did not eat any maize; they went clothed with skins, and wear their hair very long and tied up with cords very long and placed within the hair; and these strings have many small daggers attached of flint and wood and bone [many of which were excavated by the survey party in 1875, from the graves]. The land is very excellent in appearance.

Wednesday, the eighteenth day of the said month, they went running along the coast until ten o'clock, and saw all the coast populous; and because a fresh wind sprung up canoes did not come. They came near a point which forms a cape like a galley, and they named it Cabo de Galera [Point Concepcion], and it is in a little over 36 degrees; and because there was a fresh northwest wind they stood off from the shore and discovered two islands, the one large, which has 8 leagues of coast running east and west [Santa Rosa, but with only 5 leagues of coast running as described]; the other has 4 leagues [San Miguel, with only 2 leagues]; and in this small one there is a good port [Cuyler's Harbor], and they are peopled; they are 10 leagues from the continent; they are called Las Islas de San Lucas. [The name is here applied to but two islands, but subsequently the whole group appears to have been thus designated.] From the mainland to Cabo de Galera it runs west by northeast; and from Pueblo de las Canoas to Cabo de Galera there is a very

populous province, and they call it Xexu; it has many languages different from each other; they have many great wars with each other; it is from El Pueblo de las Canoas to El Cabo de Galera 30 leagues; they were in these islands until the following Wednesday, because it was very stormy.

Wednesday, the twenty-fifth of the said month, they departed from the said islands, from the one which was more to the windward; it has a very good port, so that from all the storms of the sea no damage will be suffered by those within its shelter; they called it La Posesion [San Miguel previously with Santa Rosa called Las Islas de San Lucas]. This day they advanced little, as the wind was not favorable; and in the middle of the following night they had a wind south-southwest and west-southwest, with rain, so that they saw themselves in difficulty; for it was a side wind and they were near the land, and they could not double the cape on one side or the other [they were probably between Point Arguello and Concepcion]; and the following Thursday at vespers the wind sheered off to the south; and they proceeded on their course 10 leagues on a coast running north-northwest and south-southeast; all this coast is inhabited and in appearance good land. This night they kept out to sea, for they had a side wind; and the Friday and Saturday and Sunday following they were beating about from one side to the other with foul winds and could gain nothing; and they were in 36½ degrees, 10 leagues from Cabo de Galera [off San Luis Obispo]; and in the same manner they held on Monday and Tuesday to the thirty-first day of the said month, the eve of All Saints' Day, beating about on one side and the other; and they wished to approach the mainland in search of a great river of which they had notice, which was on the other side of Cabo de Galera, and because there were on land many marks of rivers, and they found no river. [The great river for which they were constantly on the watch, and of which they evidently received confused and perplexing accounts from the Indians, was probably the Colorado. Its proximity renders certain the supposition that the Indians were well aware of the wonderful river, its whereabouts being evidently wholly misinterpreted by the Spaniards.] Nor did they anchor here, for the coast was very bold. They found during this month on this coast the weather as in Spain, from 34 degrees and upwards, and with much cold mornings and evenings, and with storms, dark and cloudy weather, and the air heavy.

(*To be continued.*)

Questions of the Day.

BELIEVING that the late President Balmaceda was a tyrant, the sympathies of the American people were with the Congressional party. This became well known to the latter, and it was the reason why by vigorous efforts they hoped to be recognized by our Government. A large class of our people would have been glad to have such a step taken, and there were not a few who felt that the Government had neglected to do what was a duty and an act in the interest of popular and good government.

Whatever may have been the personal sympathies of President Harrison and Secretary Blaine, they were bound to act in accordance with international law. Our Government was at peace with Chile and held diplomatic relations with the regularly and fairly constituted authorities. The Congressional party was governed by a Junta, not chosen by the people, but self-constituted in a sense. The Junta or Insurgent Government had no capital, and was in possession of but a part of the country. The regularly constituted Government was complete in organization, and exercised its functions at the capital of the nation. It was not the duty of our Government to institute an investigation into the merits of the controversy and decide which side was in the right; and, what is more, there are no precedents which would justify such a proceeding in such a case. While in sympathy with those who are struggling against oppression, and for good government, it cannot disregard regularity of government, nor the injury to general interests by encouraging or too quickly giving countenance to revolutions by force, and especially in countries whose citizens have the power to revolutionize through the agency of the peaceful ballot.

The late Confederacy in this country had an organized government in all branches; it was able to enforce obedience in one-third of the States in area; and for two years it had the best of the war: yet its independence was not recognized by the great nations of Europe, though the interests of two at least would have been promoted by the success of the Confederacy, and they gave to it their utmost moral support. Taking that case as a precedent, how futile were the arguments in favor of our Government granting recognition to the Chilean Congressional party until it became successful in overthrowing the government of Balmaceda. When that event happened recognition was speedily awarded; nothing else could be done because the Junta became the government *de facto*, and the only one that had any existence in that country. It is not impossible that a new revolutionary movement will be made against the existing government. Should it occur, the party in power will be able to see the propriety and justice of the course pursued by our Government. The anger of the Chileans is a spasm, and will pass away as soon as the rejoicing over the victory that has been achieved subsides. The talk of war is absurd. No threats from any source will cause our great and just Government to swerve from the path that international law points out; nor will it lower its dignity or yield any of its just rights under any circumstances whatever. This country will not provoke war, unless protecting our citizens has that effect. The disparity of numbers, resources and power between the two nations is immense,—a fact which suggests forbearance on our part; but generosity on that or any other account cannot go so far as to neglect the duty the Government owes to its own citizens. They must be protected whether an offending nation is great or small.

THE Results of the Labor Congress which sat in Germany in October were disappointing to the extreme element, but encouraging to the cause of rational progress. It is an impulse of the radical and revolutionary to go too fast and to resort to violence as a means of accomplishing an end. The governments in Europe are to a greater or less extent maintained by forces; and they are less influenced by popular opinion than in this country, and hence movements

towards the liberation and elevation of the masses are slower than here. The radical and impetuous do not stop to reflect upon the fact that they are in no position to hold contest with large and disciplined armies. In England discussion is tolerated to any extent short of the displacement of the hereditary sovereign, but in Germany it is much more restricted. Respect for popular opinion, however, is increasing in that country, and in fact in most of the European States. The moderates in the late Labor Congress seemed to be fully aware that unsuccessful revolution results in the imposition of greater restraints, and that progress is surer if gradual. The course pursued by the majority in that congress was wise, because it will not provoke the adoption of repressive measures. While labor agitation is growing more and more extensive throughout the civilized world it is conducted on more conservative lines; and for that reason the rights of labor will be more generally respected, and all that labor deserves will be more quickly conceded. The power of the labor element in this country is greater than ever before, because methods of enforcing rights are more in conformity to just principles. These methods assure success, but a resort to violent and indefensible methods would bring disrepute and failure. Popular opinion in the United States is the governing power; and the labor element is able to control to any just extent if defensible means only are resorted to in pressing its demands. The best and most durable revolutions are wrought through discussion in which all classes may freely participate.

The article in the present issue of THE CALIFORNIAN,—the first in a series on the Chinese,—is a notable one in several respects. It is the first complete exposé of the secret societies of the Chinese ever made; and the publication, two years ago, when the highbinders were in power in San Francisco, would, undoubtedly, have been followed by the murder of the author upon his first appearance on the streets of the Chinese quarter. The secrets of the highbinders are exposed, not to satisfy public curiosity, but to enable the Government, State municipal and national, to deal more intelligently with the question.

Chinese questions are just now absorbing a large share of public interest. In China events are transpiring of momentous importance. The riots and massacres of the last six months have now culminated in a rebellion that may result in the greatest upheaval of modern times.

In San Francisco Chinatown the condition of affairs is very serious. A deadly highbinder feud has been raging for several weeks, in which a number of Chinese have been killed. It is well known that the disturbances in China and in San Francisco are the work of secret societies. The publication of the paper referred to at this time is therefore most opportune: first, in giving the public the most authentic and exhaustive account of Chinese secret societies yet published; and, second, in showing the relationship between the highbinder societies of California and those great revolutionary societies of China that have thrown the whole empire into a ferment.

These secret societies in California have grown of late years to gigantic proportions. Twenty or more societies have established a reign of terror in San Francisco that has become insufferable. Many respectable Chinese have become enforced members. Despairing of seeing the societies suppressed by law they have found it safer to make terms of peace. Assassination and acts of violence are occurring with a frequency that startles even California. Men are shot down in broad daylight, and the murderer usually escapes. It is well for both races that the highbinder prudently avoids making targets of white men, and that nearly all his victims are bloody men who would, in nine cases out of ten, never meet their deserts in a court of law. A singular circumstance of the recent feud is that neither party will give information to the police to incriminate a foe. Like two quarrelsome schoolboys they want to be let alone to fight it out to the bitter end. Eye-witnesses of a murder are afraid of the Tongs; and they too are silent. The Chinese Consulate and the Six Companies want to see the Tongs crushed; and the great majority of Chinese in the settlement long for emancipation from a tyranny so galling. If the Consul-General had extra territorial powers such as our Consuls have in China many hundreds would, no doubt, be deported for execution in China, and the trouble would end. The present condition of affairs must not be allowed; and yet how the police are to suppress the societies under our laws is a problem. If the Chinese Government, with despotic power, has been unable to cope with secret societies in China, it is hardly to be expected that the police of San Francisco, ignorant of the Chinese language, and with their hands tied by constitutional law, should meet with better success here. It was hoped that after the vigorous action of the police in breaking up their halls of meeting last February the power of highbinderism would be checked. It is evident, however, from recent events that no permanent results have been achieved. In Singapore, after long years of struggle with the secret societies of that colony, the British Government have enacted legislation that deals with them very

effectually. We are informed that a specially appointed official who understands the Chinese language ferrets the criminals out; and they are immediately deported. The attention of our local grand jury should be directed to this monstrous iniquity in our midst; and, if our present laws are inadequate, for Heaven's sake let us have laws that will reach them and courts that will punish them as they deserve. That three trials should have been necessary to send the notorious highbinder Lee Chuck to San Quentin reveals a state of corruption that is a disgrace to a civilized State.

ONE of the important questions which the next Congress will in all probability consider will be the protection of the forests which constitute the charm of the upper Sierra of California and have so important a bearing upon the water supply of the Pacific Slope. California is conceded to be one of the most productive States in the Union. Nature has been most prodigal in this respect; yet it is within the power of man to seriously interfere with this. Water is king in this State, and the source of supply cannot be too safely watched. In the past the forests have been cut down with unsparing hand. Giants which have been growing for centuries have been burnt and destroyed in wanton sport by vandals. Entire forests covering miles have been consumed by the careless act of the hunter or camper, all this in spite of the watchful care of the State guardians and those in authority. The importance of the forests of the upper range to the farmer of the lowland cannot be overestimated; the rancher depends upon the water supply, and the water in turn depends upon the forests. To the Californian ranchman the question of irrigation is all important; and if the National Government is to discuss the question of the preservation of the forests it should be the duty of every citizen to look up the subject and watch well the action of Congress and influence it in the right direction. The ranchman will be called upon to answer whether he is satisfied with the present water supply. As one of the questions which will be brought up in Congress is whether the Government should increase its forest reservations and have a larger control over the forest land,—opinions differ upon this point; but there can be but one outcome. The question of irrigation is all important. Water is needed in greater quantity and at cheaper rates. It has been shown that the Government can protect the forests; and undoubtedly it is better equipped to afford such protection than the State; and few having the real interests of the commonwealth at heart will object to any movement tending to the preservation of the forests. The development of water and the formation of irrigation companies all over the State is suggestive of the interest taken in the question at this time; and it is the object of the writer not to express opinions upon the subject, but to urge the people of the State to give the topic the attention it deserves. In the next issue of THE CALIFORNIAN will appear an illustrated article on the forests of California, by a member of the Forestry Commission of the State, which will throw some light upon the subject.

NEW BOOKS

THE most important work of recent issues is a compilation and digest by Dr. Karl Schuchardt, treating of Dr. Schliemann's excavations in Greece. In the San Francisco *Bulletin* not long since it stated that Dr. Schliemann was a resident of California at the time of its admission into the Union, and that it was in California that the foundation was laid for the fortune that enabled Schliemann to carry on his great archæological explorations.

Certain it is that no man of the present century has done as much as Dr. Schliemann to aid history to pick up its broken and lost threads, while to the compiler of this last and most comprehensive work on the subject we owe the tribute of having given the world the interpretation to many discoveries for which Schliemann simply provided the data.

Archæology has taken a marvelously strong hold upon the interest of the people within the past few years. Even in California, where the newness has effectually shut us off from the influences that are the result of constant contact with the man-made monuments of countless past centuries,—even here we find men and women gone mad over Indian relics, fossil remains, rock inscriptions and geologic formations. But it is a promising madness, for it feeds the sentiment and at the same time takes the miserable and dwarfing egotism out of the common heart.

Theodore Child's many delightful papers on art and criticism that have been appearing in *Harper's Magazine* during the past year have been bound and amplified somewhat for permanent library use. The author's disregard for fixed mechanical "schools" and his incisive style in writing make him not only a forcible critic but an agreeable and instructive one as well. Any one who has ever frequented the studios of America and Europe, and watched the painful struggles of hundreds of young people of both sexes who were valiantly trying to learn to "do" heads, or flowers, or landscapes, while the frantic master of art wasted his vitality in ineffectual and uncomprehended explanations, will appreciate Child's statement that "No one can ever be taught to see nature, to feel nature, and to express it. The painter of genius will show you how he applies the brush, saying, 'see how I do it; go and do likewise, and may God help you!' And if God does not help you, your painting will not be worth talking about. The really great painters are their own masters. They are men of rare and special temperament; and through this temper they look at nature and see beautiful personal visions such as none have ever before beheld."

The author then takes up at length the great masters of art of all periods and subjects their work to the most subtle analysis. Taken all in all, the book is one that should find a prominent place in the library of every lover of art.

Sometime during the coming year we shall present to our readers a new writer, fresh from the very heart of Maryland. As a writer she is as magnetic in thought as Olive Schreiner, and as unique in style as Emily Dickinson. She is poetic, undisciplined, a lover of nature in all its moods, outspoken, and wholly untrammeled by any other canons of art than those determined by real creative power. She is a writer; she paints with both water colors and oils; she models quaint types in clay, and carves in wood with the touch of genius. Some of the editors of the leading American periodicals have written to her acknowledging the vigor of her work, and expressing a sincere regret that some pioneer precedent did not give them the courage to present her to their readers.

Porter & Coates have just issued a most beautiful *edition de luxe* of Carlyle's "French Revolution," illustrated with sixty photogravures. This is a grateful change from the era of holiday booklets and souvenirs. If one is disposed to gather together an expensive library he will ignore the ephemeral booklet, and turn with delight to the *edition de luxe* of the standard works. Almost every one enjoys reading a well-bound, clearly printed and attractively illustrated book. We are, unfortunately, creatures of such insufficient and dwarfish imagination that we demand the supplementary

aid of pictures galore to fully round out the contour of any story in our minds. And how many good books poor cuts have killed!

Who does not recall with a shock of horror the red and gold editions of Meredith's "Lucille," in which the illustrations represent the heroine as a lean, cadaverous spinster with a sour face; the Duke as the worst kind of a third-rate heavy villain; and poor Matilda standing before a mirror, looking as though a buzz-saw had planed off the back of her head and waist, leaving a sort of paper doll, plane figure, without any appreciable dimension save those of flat surface, height and raw edge? This year the Frederick Stokes Company has issued an edition of standard poets, Meredith being represented by Lucille. The series is printed on heavy calendered paper, and embellished with hundreds of exquisite wash drawings reproduced in half-tone in the Frenchiest style. The binding has a white vellum back, and covers of delicate silk the motif of which is the pink and the lavender cyclamen.

Binding does make such a deep impression upon the public mind! I have often heard people speak of our own Jerry Lynch's "Egyptian Sketches" and say that it was a real delight, a sensuous pleasure, to feel its smooth, rich, heavy London binding.

Mrs. Flora Haines Loughead is perhaps one of the best known among the California writers of short stories. She is a member of the London Society of Authors, being admitted on the strength of her story, "The Man Who Was Guilty," which had such a run in England. She is an indefatigable worker, and so closely does she devote herself to her writing and to her happy domestic life that she may be said to live the life of a recluse, as far as society and the public are concerned. Mrs. Loughead has a pleasant face, gray eyes that are always dreamy with thought, a low, broad and full brow, a firm chin and mouth, and an ivory complexion, seldom tinged with even the faintest pink. Just at present she is living in Santa Barbara, where she hopes to find the soft, equable climate beneficial to her invalid husband. Houghton, Mifflin and Company of Boston have recently issued a story from her pen called "The Abandoned Claim," which seems to be meeting with much favor. C. A. Murdock and Company of San Francisco have also issued one of her stories for the holidays called "The Man From Nowhere." This little book is the first of a series of short stories by the same author, to be issued regularly every month, in uniform style and averaging about the same length.

The title of "Atlantis Arisen," a new book by Frances Fuller Victor, gives no clue to the text until one reaches the concluding paragraph of the work. In reality it is a handsomely illustrated volume on the history, resources, growth and possibilities of the State of Oregon, written by a woman who thoroughly appreciates the necessity of accuracy and incisiveness when picturing the superior advantages of a new country to a prospective homeseeker. Mrs. Victor has a poetic sentiment which enables her to clothe the dryest facts, of such a work as this, with a most alluring and picturesque garment.

The element of wholesome comedy is so seldom found in current literature that one turns with real rest and delight to Frank Stockton's stories, not the least interesting one of which is "The Squirrel Inn," and its curious but altogether lovable *dramatis personæ*. Unlike the tantalizing plot of "The Lady or the Tiger," this one is evolved as all proper plots should be: The right people marry and the wrong ones meet their just deserts.

We are glad to read the announcement of another book by the author of "Standish of Standish." The new one is entitled "Betty Alden," and, like its predecessor, treats of the charming side of early Puritan life in New England.

"The Warwickshire Avon" is another of the year's holiday issues that deserves special mention. Arthur T. Quiller Couch has furnished the delightful reading matter, and Alfred Parsons has made the beautiful illustrations. Parsons has a peculiar talent for reproducing these quiet English scenes with a depth of sentiment and a simple vigor of touch that no other artist of the present time can equal.

A correspondent sends us an anecdote concerning the name and fame of Edward Bellamy that may not come amiss in this department. Not long since, a certain gentleman, not unknown to fame, went to the door of a little summer hotel on the shores of Long Island Sound and made some inquiries regarding some cottages that were for rent. He also requested that supper might be served to him immediately, as he was famishing. The landlady of the house is notorious for the impulsiveness of her speech and for the eccentricities of her manner, and is

as much of a character in her way as is Stockton's Stephen Petter. She was very noncommittal about her husband's cottages, and absolutely refused to get the guest any supper. Supperless and not a little incensed, the gentleman took his hat and his departure, and in the deepening twilight sought a more hospitable haven. No sooner had he gone, however, than the landlady flung a shawl over her head, and running to her next door neighbor's, breathlessly said, "You can't guess who has just been to see me!" "Who was it?" asked the neighbor. "Oh," replied the landlady "one of them big bugs that writes books and things;—that man that everybody has been talking about lately. You know— What's his name! He wrote a book, 'Out and Back, by Belladonna!'"

Ella Sterling Cummins is furnishing the San Francisco *Wasp* with a series of articles on the writers of California. She is including not only the writers known to fame, but those who, perhaps, produced but one or two good pieces of work. She says that in collecting her data one fatal lack has been noticeable in the work of almost all of the writers, and that is the lack of local color. The thoughts expressed are those belonging to common humanity, and not those developed by any peculiar or striking local environments. Some few writers have caught the spirit of the impressive Sierra, the long stretches of fog-kissed sand dunes along the coast, the hot, arid San Joaquin and Sacramento Valley plains, the desolated Missions, the deserted mining camps, the curious fellowship of pine and palm, and all that; but too many have been content to dedicate sonnets to ideal goddesses, to write of dukes and duchesses, or to describe heather patches and English uplands or lowlands that they have never seen. It is so inherent in the human race to imitate; perhaps it is because imitation is so much easier than original investigation or than creation!

"Zanthon," a novel by James Doran, recently published by the Bancroft Company, is a case in point. The author has laid his scenes in a country of which he knows almost nothing; he has not even made a study of the period of which he writes; and his characters show him to be but a superficial observer of the common life about him. Yet his work indicates an inborn talent, that, properly developed, might have become a real power. In a vague, nebulous way he sees many of the weaknesses of man and society, with a vision not corroded with bitterness but barbed with good-humored wit. He has deep sentiment too, but it loses strength by being diverted to unfamiliar objects.

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1. "Dr. Schliemann's Excavations at Troy, Tyrns, Mycenæ, Orchomenos and Ithaca." Dr. Karl Schuchardt. McMillan. $4 00.
2. "Art and Criticism." Theodore Child. Harper & Brothers. $6.00.
3. "Carlyle's French Revolution." Porter & Coates.
4. "Lucille." Owen Meredith. Frederick A. Stokes Company. $1.50.
5. "The Abandoned Claim." Flora Haines Loughead. Houghton, Mifflin & Company. $1.25.
6. "The Man from Nowhere." Flora Haines Loughead. C. A. Murdock & Co. 25 cents.
7. "Atlantis Arisen." Frances Fuller Victor. Lippincott. $1.50.
8. "The Squirrel Inn." Frank Stockton. Century Company. $1.25.
9. "Betty Alden." Jane Austen. Houghton, Mifflin & Company. $1.25.
10. "The Warwickshire Avon." A. T. Quiller Couch. Harper & Brothers. $2.50.
11. "Zanthon." James Doran. Bancroft Company. $1.25.

Cliff House in the Cañon de Chelle, New Mexico. "Some American Ruins."

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THE FORESTS OF CALIFORNIA.

BY ABBOT KINNEY.

EVERY true man loves the forest. The gnarled oak, the stiff, slim pine and colossal Sequoia each has for the forester a story, a character and a confidence. The leafy shades and the bosky dell have their delights of silence and solitude. On the upland ridge the breezes clash the needles of the tall old pines high in the air. To the lover listening below it is a sweet song of sorrow borne to him on a fragrant breath. To the forest rambler California opens a new field of interest. Its forest flora is quite distinct from that of the rest of the world; and the general appearance of the California woods is altogether different from that of any forest elsewhere.

One of the points attracting curious consideration in our forests is the number of trees restricted in their native habitat to a few acres of ground and found naturally nowhere else on the globe. Who has not heard of the giant Sequoia? Who has not heard of its girth and its grandeur, of its wonderful bark like the velvet of Lyons, and the towering stretch of its arms to the azure?

These great trees are now, at least intellectually, the property of the world. Like all great things, description may so paint them in free fancy's breadth that, to the thus attracted visitor they are a disappointment. Many of man's great monuments have disappointed me and left a regret that I had ever exchanged the picture of my imagination for a reality far inferior. I have never and can never forgive to Rome the disappointment it gave me. Romulus and the she wolf for nurse, the good Numa and the cruel Tarquin, the Horatii and the Curatii in their desperate fight, the defense of the bridge, Cato, Pompey and great Cæsar, whose death was no physic for the sick republic, and then the long line of emperors graced with Marcus Aurelius and cursed with Nero, to the Goths and fall of empire, then the Popes, the pestilence, Rienzi like a ray of light, then Popes and grandest ritual to deck their wondrous power, and Rafael and Michael Angelo, and then new Italy and its king;—all these and many more had been playing artists in my brain, and had there painted and set up a Rome that made me long to see the real Eternal City. But all my great town, except the Coliseum alone, crumbled to dust when I touched it. Not that it was not great and interesting, but that it in no way matched my creation. After wandering about in tombs and churches and narrow Italian streets, not Roman ones, for ten long days, I left Rome and never wish to set foot within its gates again. The great trees may thus disappoint some of those who travel by tourist ticket and who see them but for a few passing moments. You can not see them so. Every day that you are with them they will grow on you.

They are in this respect like Niagara. One must be with them for a time to understand their greatness and appreciate their age.

Perhaps the two things about these trees that most impress the passing traveler are the house on the stump of one great tree and the driveway cut in another through which a four-in-hand, loaded on top as well as inside, can drive without crowding. As the drag passes where the heart of the tree once was it is directly under the green and living top hundreds of feet nearer the sky.

These big trees, together with a number of other species, now only found in California, were once widely distributed. Fossil remains of some of them have been found even in the frozen soil of Greenland. Their extinction in other parts of the world seems sadly enough to be their destiny in California.

The mild and equable climate of this State has perpetuated them long after less favorable conditions have supervened elsewhere to make the environment fatal to their life.

The condition which is preventing, in all probability, their reproduction in California, is a progressive diminution of humidity in the air.

Humboldt is the first who remarked on this condition. One rarely sees a wild seedling Sequoia of either variety, a seedling Sugar Pine (*Pinus Lambertiana*) or Monterey Cypress (*Cupressus Macrocarpa*). This is also true of the Torrey Pine, the Wild Cherry of Catalina and of many of our trees and shrubs; while on the other hand there is a strong reproductive power in others of the California trees such as the Douglas Spruce, Monterey Pine, several of the oaks, etc.

Speaking generally, the trees that are dying out through non-reproduction have small seeds with a minimum of stored food for the seedling, while those that are taking their place have large seeds with an ample store of nourishment for the baby plant to carry it through the long dry season.

The seeds of the two great Sequoias are exceedingly small and light, a fact the more notable on account of the great size of the parent trees. The seeds of all these species that are losing ground are fertile in themselves, and with proper care come up as freely and evenly in the nursery of the gardener as do those of the others; but in the struggle for existence on the mountains and plains they are unable to cope with the changing climate, or with the newer and better adapted species.

Several groves of the Sequoia Gigantea or Big Trees are found in California. This great tree is now native only to California, and in this State is confined to one range of mountains, the Sierra Nevada. The largest grove is a true forest, and lies back of Fresno in the southern Sierra.

The largest tree in the world has only recently been found. It is a Sequoia gigantea and measures 160 feet in circumference at the highest point a man can reach from the ground. This tree stands in a small valley surrounded by precipices at the headwaters of the Kaweah River. The situation of this greatest tree is most appropriate. It stands in the midst of the grandest scenery in the Union. Around it tower snowy peaks twelve, fourteen and fifteen thousand feet above the sea. Forests spread over the hills and mountains and from them rush the rollicking rivers through rocky ravine and gorge, tumultuously tumbling in youth only to emerge in maturer mind to the valleys for the serious work of irrigation.

On one side of this great Sierra lies a fertile valley of California, where the grain fields are being replaced by the vine and fruit-tree through irrigation; on the other side to the east is a valley 120 feet below the level of the sea, with a salt lake receiving but not sending out water. Beyond this the country stretches desolate to the deserts of Nevada.

An interesting feature of the eastern side of the Sierra is the abruptness of

Giant Sequoia "Wawona," 28 Feet in Diameter, 275 Feet High, Mariposa Grove.

its rise from the valley below sea-level. The increase of height within a distance of five miles is more rapid and more considerable at this place and at San Jacinto Mountain above the Colorado desert, than anywhere else in the world. The effectiveness of the mountains is correspondingly increased.

The slow but sure disappearance of these magnificent monarchs of the forest is a lesson the people of New England might well take to heart. The vital statistics of the native stock in that section shows a death rate higher than the birth rate. The birth rate of a stationary population is about one in thirty-eight, that of France. The New England birth rate amongst the natives is now estimated at less than one in forty-five.

Should this condition continue the disappearance from the world of this forceful, moral and intellectual race is inevitable.

A beautiful tree is a poem and a thing of joy. Perhaps the tree that combines best beauty and grandeur is the brother of the giant Sequoia, the lovely and impressive Redwood. The Sequoia sempervirens is confined also to one range of mountains, the Coast Range near the Pacific Ocean. While vast forests of it exist and to-day form the lumber resource of California, the Redwood is not reproducing itself, but is being replaced as it is cut and burned away by other and less notable trees. It has one very exceptional trait for a conifer which is doing much to retard its disappearance. The Redwood sprouts from the cut stump and makes a numerous progeny to replace the grandeur of the parent used by the lumber pool.

The vitality of the Redwood stump is paralleled by the Redwood log. I have heard of several striking instances of these logs sprouting long after having been cut, and have seen one instance myself. It was a very large log, weather-stained and lying on two or three others in a narrow valley of the Santa Cruz Mountains. From this log were two bright little branches of redwood foliage, one about two feet long and the other six inches.

The log had been cut three years. This quality would indicate a facility for coming from the cutting which would be useful in replanting the desolated lumber districts.

The grove of big Redwoods near Santa Cruz is very much more picturesque than that of the big trees at Calaveras or elsewhere. It stands in a small side ravine with a dense growth of forest on every side.

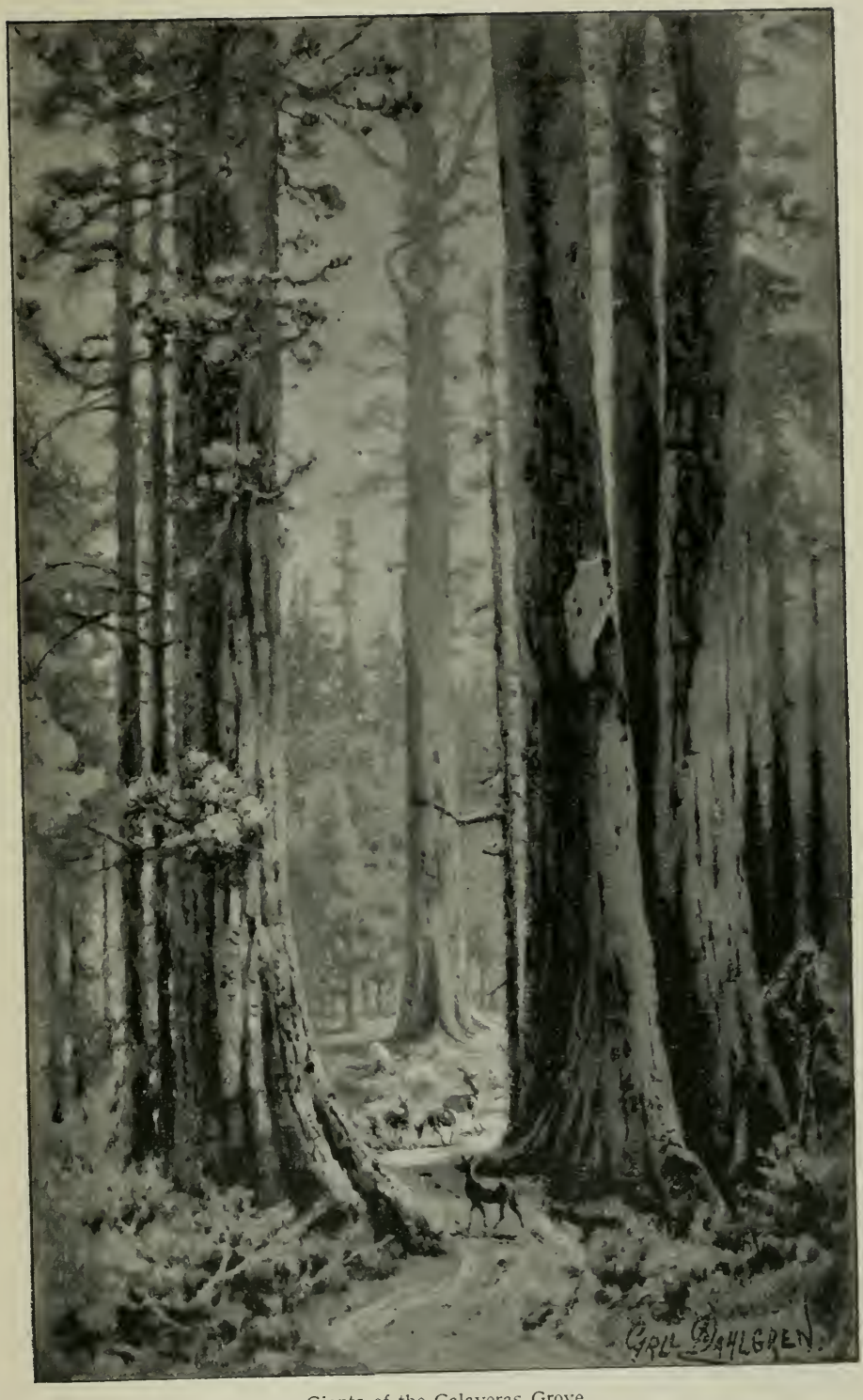
Beneath the trees creeps the pretty Yerba Buena; the thickets are threaded by trickling springs and little streams; and the whole is ornamented by ferns and tall brakes most graceful in their feathery foliage.

Every admirer of our fated forests should visit the Redwood grove of big trees at Santa Cruz. A magnificent Redwood has been cut for exhibition at the World's Fair at Chicago, the illustrations in the present paper showing the section resting upon the parent stump, while the tail-piece shows the tree leaving the forest.

The Coast Range forests are full of interesting trees. One of these is the Madroña-Arbutus Menziesii. Its leaf is glossy, reminding one of the magnolia, and its bark a dark red except when at certain seasons the old bark is shed; it is then white. The Madroña bears red berries, and in the damp cañons of the Coast Range, where it is at its best, is certainly a beautiful addition to the more somber Redwoods.

It thrives in even dry situations, but when it is intended to plant this tree in dry places the seed should be taken from trees found on our dry foothills, as in the lateral valleys north of San Francisco Bay.

This discretion in seeds is very essential to the successful forester. The same species of tree often has a very wide natural range. It has now been demonstrated that the seeds of the same kind of tree have very different capacities for producing trees suited to the extremes of climate within the



Giants of the Calaveras Grove.

"Professor Gray." "Doctor John Torrey."

range of the species to which the parent tree belongs.

Thus if one desired a Douglas spruce for Scotland the seed should be sought in the damp, cool climate of Washington or Vancouver. If on the other hand the tree was desired for the Sierras of Spain the seed should be taken from the variety found on the difficult ranges that surround us here in the South. The long-coned spruce of the Sierra Madre strays down the hot southern slopes of this steep range and even joins hands in the cañons with the more adventurous sycamores coming up from the valleys. This spruce may play an important part in retimbering some of our uncultivatable foothills.

It is a beautiful tree when mature and equally attractive when young. In Southern California it is at once the victim and the ornament of our Christmas festivities. The California Holly (*Heteromeles arbutifolia*) suffers also most in man's moments of merriment. Its red berries and serrated leaves are very ornamental. We have the English holly in a few mountain localities, but not sufficiently accessible to be much used.

One of the most beautiful of our native trees is the Wild Cherry of Catalina (*Prunis occidentalis*) confined in in its native habitat to that island. It is a beautiful tree of dense dark-green foliage and glossy leaves, reminding one from a distance of a perfect orange tree. The forestry station at Santa Monica will, we hope, contain some of these trees for distribution next year.

The Lawson Cypress, so splendid and so useful a timber tree in damp soil, is perhaps the most attractive of the evergreens; but it is not suited to all or even many places in the south.

When one commences a conscientious compendium of the beautiful trees of California the deserving aspirants crowd so fast arouud one that the task, to be properly performed, must be so unduly lengthened out as to be quite unmanageable in an article of this kind.

The oaks are well represented in California, and extend from the high Sierras to the bluffs by the sea, as at Santa Barbara.

Of these the two most useful for timber are the *Quercus Garryana* and the *Quercus oblongifolia*. The rest of the family are now used mainly for fuel; but with better information as to the treatment of the wood, and the season at which it should be cut, many of our oaks will certainly be found otherwise useful. The *Q. lobata* is the large oak common in the central valleys of the State. It is often a great tree and picturesque; but it is, in my opinion, never a peer to either the Golden Leaf Cañon or Iron Oak (*Q. chrysolepis*) of the north, or of our Red Live Oak (*Q. agrifolia*) of the south.

Both these trees have at once a friendly dignity and a beckoning beauty that suggests on the one hand ancestors and respectability, and on the other picnics and love scenes.

In them Cupid seems to play hide and seek in the beard of a patriarch.

There are two immigrants of the family that do remarkably well here, the English Oak and the Cork Oak. The latter is a good grower in Southern California; and the great commercial value of its bark should increase the planting of this tree. The gathering of the bark does not injure the tree, so its value on waste places is certain and of indefinite duration. In this respect it differs from our native Tan-bark Oak, the bark of which is so well known in commerce.

This tree is cut down and stripped of bark, and the wood left to rot, or worse,—to feed the flames that may thus gather force to destroy the young trees that would replace those cut. This oak is fast being exterminated, and as its wood brings the highest price in the northern markets for fuel it is an illustration of the waste now prevalent in all timbering and forest methods in this State.

There can be little doubt that a proper management of the tan-bark

Giant Pine on Mt. Wilson, Sierra Madre Mountains.

stripping would leave the tree alive and insure regular crops from the same trees within a few years of each other. We may safely affirm this on the experience of the quinine tree-planters in India. At first the trees were all cut down and stripped of bark as in their native woods on the Andes. Now they have found that by stripping half the bark one year and in a year or two the other half the tree lives and produces continuous crops of bark.

Our Tan-bark Oaks can do the same. As these trees have been cut largely on the public lands the laws have been violated and the people's property despoiled. The cutters being trespassers, and subject to arrest and punishment, naturally do their work in the most hasty and imperfect manner, and even set fires to hide their tracks.

When remonstrated with, these persons say that they get their living from these practices, and if they prosper what matter if after them does come the fire with its dangers, its desolation, its creation of alternate floods and draughts on the denuded watersheds? What matter, if they grow rich, that the valleys by and by should support one family where they could have supported with properly protected watersheds a hundred families?

Louis XIV of France appreciated fully the political abuses which were so severely oppressing his people; but instead of remedying them he went on in his pursuit of pleasure and personal glory, even adding burden to burden and oppression to oppression, saying with a shrug, "After me the deluge." So, sure enough, the deluge came. It came in the red blood of the nobles of France, and its flood was swelled by the blood of the Bourbons of his own royal family. The French Revolution cut away the dams and barriers of tyrannical regulation and freed the pent-up passions of the people. Injury, injustice, extortion, had filled the reservoirs thus broken. The eddying terrors of the torrent swept blindly through France, and the innocent were as often its victims as the guilty.

So must the present treatment of our forests, full of folly and crime against law, against experience, and against nature, bring its punishment. And in the desolation the innocent must go down as well as the guilty. There are, however, no innocent, for we may consider that all who stand by and see the mountain watersheds so denuded of forests as to be unable to hold and detain the rains and thus bring on torrents at one time and droughts at another are guilty and should be punished.

It is now a thoroughly demonstrated fact that a certain proportion, varying between one-fourth and one-fifth, of any large area, should be maintained in forest to secure the largest agricultural returns. If more forest be destroyed, while the total arable area is increased, the total output from the soil is decreased. The reason of this is that excessive forest denudation increases extremes of temperature, and consequently increases detrimental winds and increases extremes of humidity and dryness, all of which diminish crops.

When it comes to a mountainous country, the steep declivities of all watersheds should be preserved in forest; and the mountain forests generally should be treated with a conservative spirit.

The roof of a house will shed water as fast as it falls upon it, and a few minutes after the rain has ceased to fall it is dry. No matter how extensive a roof may be, its base or outlet pipe is either a flood in rain or perfectly dry in good weather. The same thing is true of mountains denuded of forest and reduced to bare steep surfaces: the water can not tarry; it must rush down to the valley lands below, carrying soil, gravel and boulders in its way.

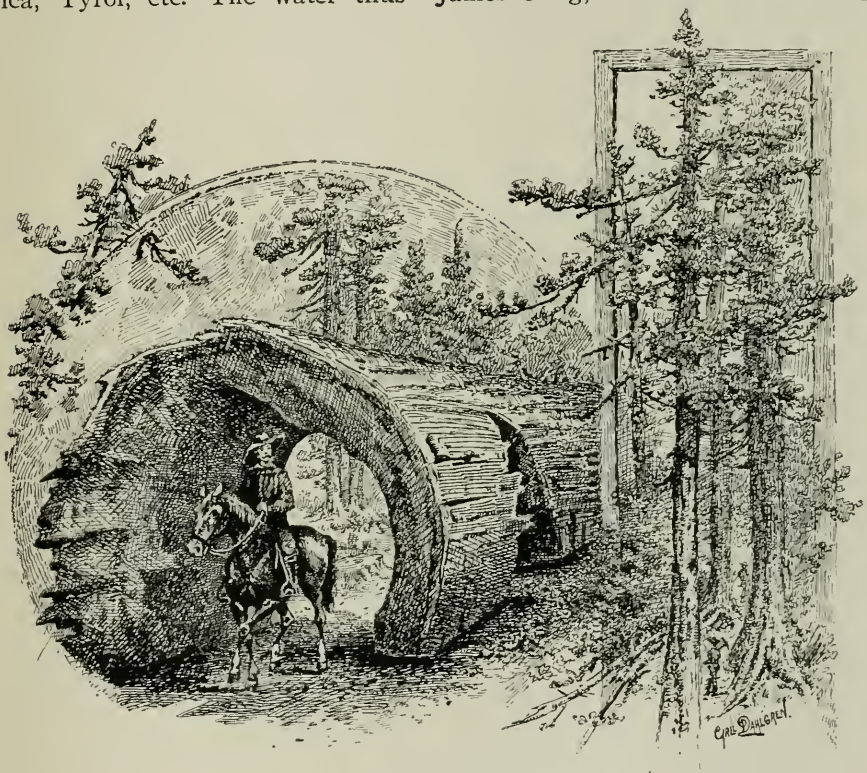
In mountains naturally bare, as in the Colorado Desert and Sahara Desert, an exceedingly small rainfall creates the most destructive torrents. Thus in the Colorado with a rainfall of four

inches annually there are more railroad washouts by torrents originating from the slight rainfall on bare mountains, than there are at Mt. Shasta with sixty inches of annual rainfall detained by wooded mountain slopes.

In mountains formerly forested, but now denuded, torrents form that are violent, unregulatable and destructive, as in Palestine, Provence, Spain, Africa, Tyrol, etc. The water thus suddenly delivered from a given watershed is not only dangerous in its powerful flood,—action in tearing away and destroying in some places, while it dumps its debris in others,—but it is lost. Such flood-water is gone, and the wells, springs and streams of the district must be diminished in their permanent flow.

About Pasadena these results of unwise forest denudation are already evident.

The torrent in Allen Street, that crosses the old Mutual Orchard tract near the steam laundry, together with a number of others, have all come into existence within the last nine years owing to brush-clearing on the foothills. On the other hand the great Edwards' fire on the watershed of Precipice Cañon diminished, according to the distinguished engineer Mr. James Craig, the summer water supply of that cañon by at least one-third for years afterward. The results of forest denudation on mountains has been amongst other things to increase largely the amount of debris carried by the streams or torrents in such districts. While still amongst the steep grades in the mountains the streams carry most of the debris brought into them from the bare hillsides. But when the waters reach the lower grades of the valley the slackened current is



A Fallen Giant in Mariposa Grove.

no longer capable of carrying the load; so first the boulders, then the stones, then the pebbles, then the sand and at last the clay and fine earth are deposited as the grade diminishes. In this way torrents frequently fill up their channels during floods and run off into some new and unexpected course. The Los Angeles River is a stream threatening to do this. To prevent the overflow and destructive action of torrents, dikes or levees are built. As the bed of the stream rises so must the levee. The top of the dike of the Talfer torrent at Boetzen in the Tyrol is now on a level with the roofs of the four-story houses.

Other torrents in the neighborhood have raised their beds even higher, and in spite of every precaution disastrous floods every now and again overwhelm the country.

Mr. Gervaise Purcell, formerly an engineer in the Japanese railway construction service, tells me that one of the valley railroads there, in passing several such diked-up torrents, found their beds so much above the surrounding country that tunneling was resorted to, and the railway now goes *under* the stream, not over it. We might proceed in this inquiry to the disastrous effects of landslides and avalanches in denuded mountains, to the consequent damming up of gorges or streams, and the subsequent sudden bursting of the barrier with a terrible flood for the valley.

We might examine the difference in the rate of snow-melting and a hundred other things germane in interest, but the time will only permit a summary. Thus we know that a forested watershed intercepts, detains and absorbs the rain so much that a given amount of water falling on such a watershed would be much longer in flowing off, would give more opportunity to the water to penetrate into the spring veins and tend to make the stream flowing from it more perennial than the same amount of rain falling on a bare watershed of the same area. In the one case all the rainfall would be so intercepted by the thousand impediments offered by the forest, that it would take weeks to deliver a given rain where in the other case it would take but hours.

Any one can appreciate the difference and figure out the volume and depth of water in each case, say where one hundred million gallons must pass a given point, from the wooded watercourse in five weeks; from the bare and roof-like one in five hours.

When one reflects a little on this point it is not hard to understand how whole countries have been depopulated and ruined by the destruction of their forests, and how every existing civilized country except the United States has long ago been driven for self-preservation to a scientific forestry management.

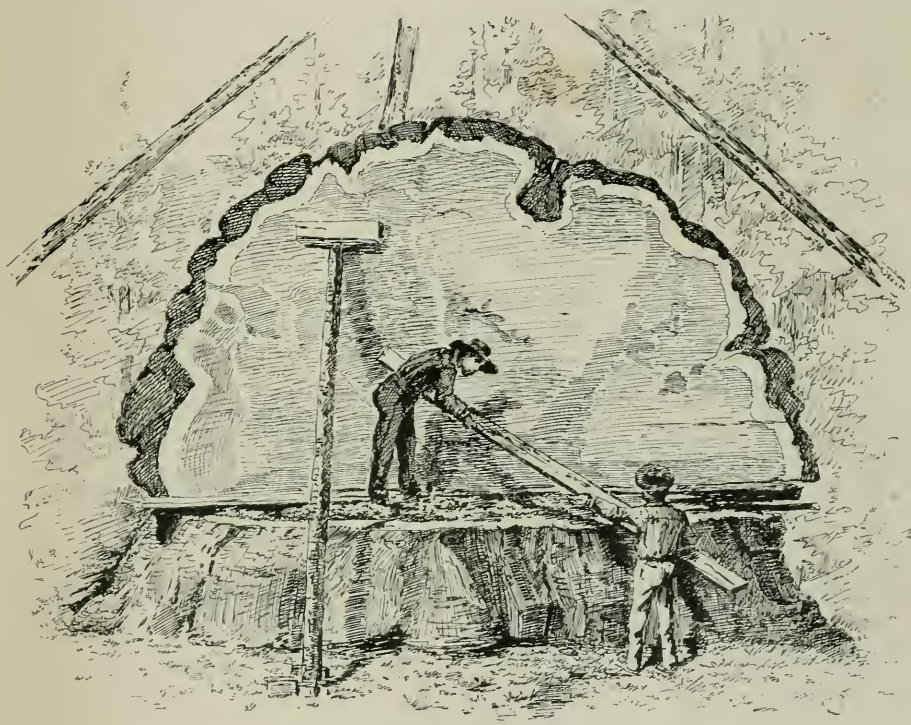
There is one other tree whose treatment in this State distresses both the sentimental and the reasonable person. It is that splendid giant of the forest the Sugar Pine (*Pinus Lambertiana*). This tree is the largest pine tree of the whole world and a most valuable timber tree. It is distinguished by its sugar-like gum on wounds, by its long spineless cone, by its graceful habit, its great height and by its growing in forests of other trees and not in solid groves all its own. One of the peculiarities of this tree is the free splitting quality possessed by a certain proportion of them, but not by all.

Taking advantage of this the shake-makers eke out a poor subsistence by tramping through the Sierras and felling every grand sugar pine they come across. Some split well; a few lengths of these are used, but thousands upon thousands of feet of clear lumber are left to rot and feed the flames. Some do not split well; and these are left entire, a menace to their fellows of the forest and a source of sorrow to the sagacious. The shake-maker like the tan-bark gatherer is a trespasser, a violator of law and a thief of the public property. These two are the authors of the grossest waste in our forest exploitation. The mill-men, however,

and especially those whose timber is largely derived illegally from Government and State school lands, are careless and wasteful in the extreme. It is only within a few years that any of them seem to have realized, even when cutting on lands to which they had title, that the mountain forests under reasonable management were capable of furnishing a perpetual supply of timber. The usual custom is to cut over a district, to leave the tops and limbs of the trees a food for flame sure to destroy one crop of young trees, and to abandon the mill. How much better to take out the ripe timber, to protect what is left,—which in turn will soon be merchantable,—and to regulate the new growth, to thin it out, to protect it from sheep, to encourage the right varieties, and thus to make the mountain lands, useful only as forest producers, a perpetual source of revenue.

When we learn that the total forest area of Saxony gives a net annual return of $3.25 per acre, or ten per cent on a valuation of $32.50 per acre, we can understand how far we now are from an economical use of our forests. The Federal Government and the State now sell their forest lands in fee for from $1.25 to $2.50 per acre.

The purchaser is either a speculator, or else buys on the calculation of one of our wasteful cuttings, with no use of any of the secondary products as firewood, and no expectation of a future crop. The land when once cut over is usually abandoned.



Section of a Giant Redwood for World's Fair.

When we consider the importance of so managing our forests as to insure a supply of wood, timber, fuel, etc., for our people, and still more important to preserve the integrity of the forest area, while using its products, for the climatic effects and the safety of our watersheds, every one must condemn

the present system, or, more properly, lack of system.

Coming back to the pines we find this family in California exceedingly interesting.

There are to start with more species on the Pacific Coast, and more in California, than in any similar area in the world.

The Pacific Slope has twenty-three species, California eighteen, and there are besides ten well-marked varieties. We have the largest pine tree in the world, probably also the smallest, the one with the largest cone, the one with the smallest, the best nut producers, and the only pine with its foliage growing as solitary leaves instead of in bunches. Several of the species are only found in very restricted localities, as the Torrey and the Monterey Pine.

If it were not for the Sugar Pine we would still have the finest and grandest pine tree of the world in the Pinus Ponderosa or Yellow Pine. This tree extends throughout the mountain region of California, and with the Incense Cedar and Douglas Spruce forms the coniferous forests on our own southern mountains.

The Piñon Pine, the Digger Indian, the Coulteri, or big cone, all with large, sweet, edible seeds, grow in our driest and hottest foothills, and with the Juniper and Mesquit hold out a hope for turning much of our deserts to use. This latter tree has a gum similar to gum arabic, which it is now used to adulterate. It has also an edible seed much used by the Indians and Mexicans both for themselves and for their stock. Its wood ranks above oak for firewood, and is practically indestructible in the ground. Of all trees in the world it has the widest range, extending from the deserts and plateaus east and west of the Sierra and Rocky Mountains through Mexico, South America, and crossing the Andes is found still in La Plata and Bolivia. It comes from the seed easily, and under favorable conditions makes reasonably rapid growth and a fine, good-sized tree.

And still we have said nothing of the California Laurel, our native and fragrant Bay, whose wood is now so valuable for cabinet work; nothing of our Alders, Ashes, Maples, Firs, Poplars, Willows, Cottonwoods, Sycamores, Walnut, and other interesting trees, nor can we within these limits. It remains to say a few words about the work of the State Board of Forestry and the needs of forestry in California. The Board has kept during the summer, and until the funds failed, a forest police. These officers have posted throughout the State fire notices; have arrested persons caught setting forest fires; have reported robberies of timber to the Department of the Interior when on Government lands, and to the State's Attorney-General when on school lands, and have generally educated and advised the people as to the importance of a sensible forestry system.

The Federal Government has prosecuted its cases against timber thieves as fast as could be expected, and in the last one tried has secured a verdict for forty-one thousand dollars; but strangely enough the Attorney-General of the State has not thought himself called upon to protect the State school lands in forest, nor to try to recover the value of lumber stolen from them.

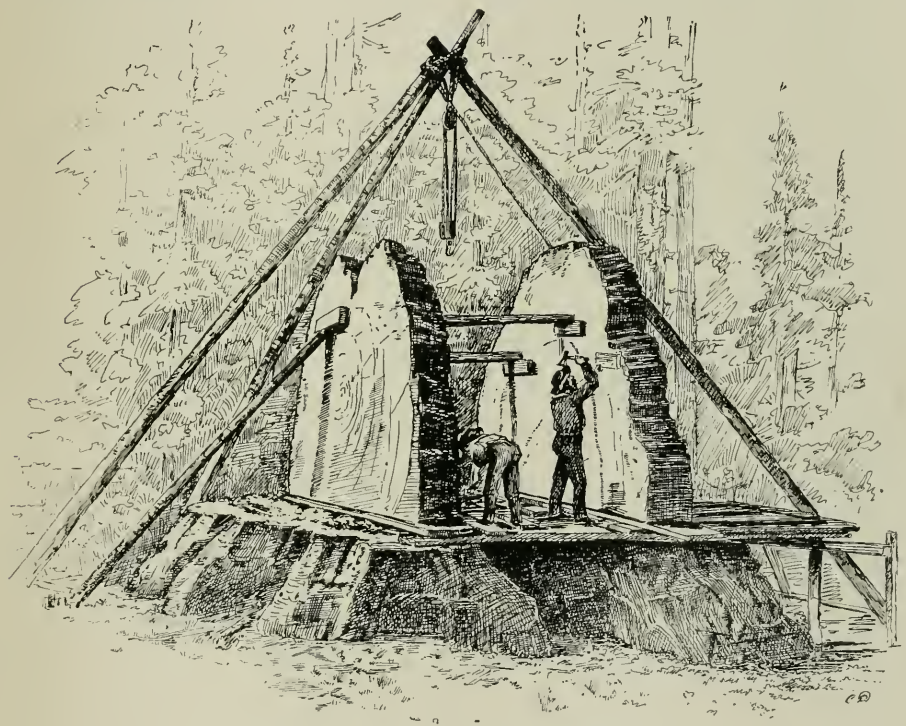
We presented one test case in which the evidence was complete and conclusive, from the wood-choppers, millhands and surveyors to those who had sold the sawed lumber.

This case involved thousands of dollars for the School Fund; it was one of many. The parties were rich and responsible; but the Attorney-General would neither himself prosecute, nor authorize us to use the name of the State. The mountain school sections are only valuable for their timber; if this is cut and stolen the School Fund is a permanent loser.

In this way the schools of the State have been defrauded of hundreds of thousands of dollars.

The Board's engineer has continued the preparation of the complete and accurate forest map of this State, commenced in our last report, and which has been so much commended.

The new departure of making a complete scientific account of the forest trees of California, in popular form, a thing never before done, has been intrusted to the distinguished botanist Prof. J. G. Lemmon and his accomplished wife.



Section of a Giant Redwood for World's Fair.

In the report for 1891, a full and complete account of the pine family, with illustrations, may be found.

Mr. W. S. Lyon, the present head forester, and an accomplished botanist and practical tree-grower, has a valuable article on some of the trees suitable for planting in California. The special agent's report will also be found interesting.

The great departure made by the Board in the last year has been the establishment of forest experimental stations in the different climatic belts of the State. We commenced the encouragement of tree-planting by bulletins and seed distribution.

This system was found unsatisfactory. Much rare tree-seed was lost through the lack of knowledge as to its treatment by the recipients; and we could depend on no reliable record as to what trees were best for the very various conditions in this State. On the other hand many groves of rare trees have been established in many parts of the State; and we now know that trees like the Sugar Gum (*Eucalyptus corynœalyx*) will thrive in nearly all the more difficult parts of California, and in places where frost or drought has been too much for the common Blue Gum.

But the general results were not good. A record was hard to get, hard to keep up, and still harder to show to

tree-planters. By the new system of stations a person, after their establishment, can go and see with his own eyes what new or native trees will do under varying circumstances, and can tell which he likes best to plant for attractiveness as well as for utility. The stations will be planted in park form, and will be places of beauty as well as of instruction. One of them is 100 acres in extent, and they are situated in such different climates as the Bidwell Station at Chico, the Merced Station in the center of the State, the Santa Monica on the sea-coast, and the Hesperia on the edge of the Mojave. Bye and bye our tree record will be complete and invaluable, and our stations will make tree-planting under any conditions in this State a certain science instead of a risky experiment as it now so largely is. All this valuable land worth about $100,000 has been donated in the most generous and public-spirited way; and the State has now about $10,000 worth of young and rare trees ready to be set out as soon as the Legislature provides funds.

The demands of rational forestry in this State may be summarized as follows:

All Government mountain forest lands to be at once reserved from sale.

All State school forest lands to be also reserved from sale.

All such lands to be placed under the management of forest officers who will regulate pasturage, protect the game for the true sportsman, prevent or put out forest fires, manage the new growth with a view to making it eventually valuable, and sell on the stump or otherwise the ripe timber, tan-bark, firewood and other products of the forest. The fees from such management to provide as in Europe for its cost.

In this way, and in this way only, can be secured a supply of timber, firewood, resin, gums, nuts, tannin, charcoal, etc., for even a few years hence.

In this way only can we insure the protection of our valleys, farms and towns from torrents and floods. In this way only can we secure the permanency of our wells, springs, streams and water supply.

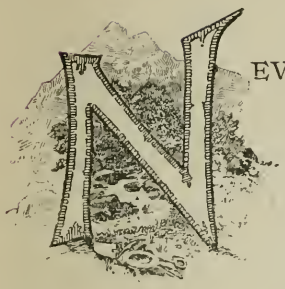
California, in its dry and wet season, in its valleys and steep mountain ranges, and in its moderate and, in places, small rainfall, is similar in its general conditions to those countries that have been so much injured, even often destroyed, by the results of forest denudation.

This is true also of all the Rocky Mountain region and of the territory west of it. Every day that passes will make the forestry measures absolutely requisite for the safety of this large area more difficult and more expensive to carry out.

All friends of the forest should pursue untiringly the objects set out in the order named.

HOW ANGELS GOT RELIGION.

By George Brooke.



EVER heard how we got religion to Angels, stranger? I thought, uv course, everybody 'd heerd that yarn. Tell yer? why sure; but let's licker again and I'll reminisce.

"Yer see 'twas afore Angels got to be sech a big camp as 'twas later on, but it was a rich camp and a mighty wicked one. There were lots uv chaps there who'd jest as soon die in their boots as eat; and every other house was a dance-house or a saloon or a gambling-hell. Pretty Pete and his pardner Five Ace Bob was reckoned the wickedest men in the State; and Old Bill Jones, what kept the Golden West Hotel, had a national reputation for cussin'. The idea of a parson striking the camp never was thought uv; but one day I was playing bank into Pete's game when Five Ace came a runnin' in 'n' sez: 'Boys, I'll be ——, but there's an ornery cuss of a parson jest rid up to Jones'. He's got a pardner with him, and he 'lows he's goin' to convert the camp.' 'The —— he is,' sez Pete. 'I'll finish the deal and go down and see about that.' So we all walked down to Jones', and thar, sure 'nuff, in the bar, talking with Old Bill, wuz the parson, black coat and white tie 'n' all. He was a big, squar'-shouldered chap with a black beard and keen gray eyes that looked right through yer. His pardner was only a boy of twenty or so, with yeller, curly ha'r, pink and white gal's face, and big blue eyes. We all walked in, 'n' Pete he stands to the bar 'n' shouts fer all hands ter drink; 'n' to our surprise the parson 'n' the kid both stepped up and called for red licker 'n' drank it. After the drink was finished the parson sez: 'Gents, as yer see, I'm a minister of the gospel; but I see no harm in any man drinking ez long ez he ain't no drunkard. I drank just now because I want you to see that I am not ashamed to do before yer face what I'd do behind yer back.' 'Right yer are, parson,' sez Pete, 'put it thar;' 'n' they shook hands, and then Pete he up and called off the hull gang, Five Ace 'n' Lucky Barnes 'n' Dirty Smith 'n' one 'n' all the rest uv 'em. The parson shook hands with all uv us and sed he was going to have a meetin' in Shifty Sal's dance-house that night, ez 'twas the biggest room in camp, 'n' ast us all to come, 'n' we sed we would.

"When we got outside Pete sez, 'Boys, you mind me, that devil dodger 'll capture the camp;' 'n' he did. That night we all went along down to Shifty's and found the parson and the kid on the platform where the fiddlers ust to sit; and every man in camp wuz in the audience. The parson spoke first. He sed: 'Gents, I want to tell yer first off I don't want any uv yer dust. I've got enuff fer myself and my young friend, 'n' there won't be no rake-off in this yer meetin'-house, 'n' I'm not here to preach against any man's way o' makin' a livin'. I will preach agin drunkenness, and I shall speak privately with the gamblers; but I want to keep you men in mind uv yer homes 'n' yer mothers 'n' yer wives 'n' yer sweethearts, and get yer to lead cleaner lives, so 's when yer meet 'em agin yer 'll not hev to be 'shamed;' and then he sed we'd hev a song, 'n' the youngster he started in 'n' played a concertina, and sang, 'Yes, We Will Gather at the

River;' 'n' there wuzn't one uv us that it didn't remind uv how our mothers ust to dress us up Sundays 'n' send us to Sunday-school and stand at the door to watch us down street, and call us back to ast if we were sure we had our clean pocket handkerchur; 'n' I tell yer, mister, thar wuz n't a man with dry eyes in the crowd when he 'd finished. That young feller had a v'ice like a angel. Pete he sed it wuz a tenner v'ice, but Five Ace offered to bet him a hundred to fifty it wuz more like a fifteener or a twenty. Pete told Five Ace he wuz a —— old fool 'n' didn't know what he wuz talkin' about.

"Well, things run along for about a week, 'n' one day Pete come to me and sez: 'Look here, Ralters, this yere camp aint no jay camp, 'n' we 've got to hev a church fer the parson. He 's a jim-dandy, and won't ask for nothing. He 'd jest natchelly go on prayin' and preachin,' 'n' tryin' ter save a couple uv old whisky-soaked souls like yourn and Bill Jones', which aint wuth powder to blow 'em to ——, 'n' you 'd let him go on doin' it in that old shack of Sal's 'n' never make a move. Now, I'm goin' to rustle round 'n' dig up dust enuff from the boys, and we 'll jest build him a meetin'-house as 'll be a credit to the camp;' 'n' in a few days the boys hed a good log meetin'-house built, floored, 'n' benches in it 'n' everythin'. The parson was tickled most to death. Next they built him a house, 'n' he 'n' his pardner moved into it. Then Pete said the gals must go; sed it wuz a dead, rank, snide game to work on the parson ter hev to go down street 'n' be guyed by them hussies ('n' they did guy him awful sometimes too); so the gals they went. Then Pete sed the church had to be properly organized; hed to hev deacons 'n' churchwardens 'n' sextons 'n' things; so old Bill Jones 'n' Alabam 'n' me wuz made deacons, 'n' Pete 'n' Five Ace was churchwardens.

"In a month every last man in camp wuz worryin' 'bout his future state. Old Bill Jones came into meetin' one night with his face 'n' hands washed 'n' an old black suit on, 'n' sot down on the anxious bench and ast to be prayed fer. The parson knelt down 'n' put his arm round him, 'n' how he did pray; before he got through Lucky Barnes, Alabam 'n' me wuz on the bench too, 'n' Pete shoved his Chinaman up the aisle by the collar 'n' sot him down 'longside o' me. Pete sed he was a high-toned Christian gentleman himself, hed been born 'n' raised a Christian, 'n' wuz a senior churchwarden to boot, and that he 'd make a Christian of Ah Foo or spoil a Chinaman. That parson prayed most powerful that night. As a off-hand, rough 'n' tumble, free 'n' easy prayer I never see his beat; he hed the whole aujience in tears, 'n' you might hev heard Pete's amens 'n' glory halleluyers off to Buller's Flat. Old Jones wuz a rolling around on the floor 'n' hollering fer to be saved from the Devil before the parson were half finished, 'n' he made so much noise that Pete hed to fire a bucket uv water over him to quiet him down. That meetin' wuz so plum full uv the spirit (ez the parson called it) that it never broke up till 12 o'clock, 'n' wouldn't hev broke up then only Pete sed he 'd hev to quit ez his shift to deal faro begun at 12.

"There wuz over twenty perfesses that night not countin' Pete's Chinaman, 'n' next Sunday we hed a big baptizm in the crick, 'n' forty 'uv us wuz put through. Pete sed he reckoned Ah Foo hed better be put through every day for a week or so, sence he 'd always bin a dod gasted heathen, but the parson lowed onct wuz enuff, but he giv' him an extra dip jest fer luck; 'n' I never see a more ornery lookin' cuss in my life than that Chinese were when he came out.

"The Chinese laundrymen were ast to jine the church, but they wouldn't savey, 'n' so Pete 'n' Five Ace, Old Bill 'n' me 'n' Alabam we waited on 'em 'n' told 'em to git, 'n' took 'em down to the crick 'n' baptized 'em jest fer luck. Pete said if they stayed Ah Foo 'ud git to backslidin' fust

thing he knowed, 'n' then where 'd *his* reputation be.

"Waal, stranger, things run along nice 'n' smooth fer a couple uv months er so till Chris'mus come nigh. The boys hed been a keepin' mighty straight; there wasn't a man in camp that drunked more'n wuz hullsome fer him; there hed n't bin a shootin' scrape fer weeks. Pete said things wuz gittin' so all-fired cam 'n' peaceful that he wouldn't be at all surprised to git up sum fine day 'n' find Ah Foo with wings 'n' feathers on his legs like a Bramah hen. Nary a man packed a gun, 'n' when a gent 'ud forgit 'n' drop a cuss word he'd beg parding. The parson was thick with all the boys. He writ letters for us, advised us about all our biznus, 'n' knew all about everybody's affairs. Lots uv 'em gave him their dust-sack to keep fer 'em, 'n' he knowed where every man hed his cached.

"Along jest afore Chris'mus cum, Pete called a meetin' uv the deacons 'n' churchwardens down to his place, 'n' after the sexton (Ah Foo) had brought in a round of drinks he said: 'Gents, ez chairman ex officer in this yer layout, I move that we give the parson a little present fer Chris'mus. Yer know he won't take a durn cent from us, 'n' never has. Uv course he has taken a few thousand from time to time to send to orfings 'n' things uv that kind, but not a red for hisself or pard; 'n' I move that we make him a little present on Chris'mus day, 'n' it needn't be so —— little, either. Gents in favor 'll say so, and gents wot ain't kin keep mum. Carried, 'n' that settles it. Five Ace 'n' me 'll take in contributions, 'n' we won't take any less than fifty cases.'

"That wuz two days afore Chris'mus day, 'n' when it cum Pete 'n' Five Ace hed about five thousand in dust 'n' nuggets fer the parson's present. Pete assessed Ah Foo a month's pay, 'n' he kicked hard accordin', but 'twer' n't no use. The day was bright 'n' clear, 'n' at 'leven o'clock every man in camp wuz at church. The little buildin' looked mighty tasty,—all fixed off with pine tassels 'n' red berries we'd got in the woods, 'n' every man wuz dressed out in his best duds. At 'leven exact the parson 'n' the kid, who hed bin standin' at the door shakin' hands 'n' wishin' everybody what cum in merry Chris'mus, cum in 'n' took their seats on the platform. Pete 'n' Five Ace 'n' Bill Jones 'n' Alabam 'n' me sot on a bench jest in front o' the platform. We wuz all togged out in our best fixin's, 'n' Pete 'n' Five Ace they sported dimons till yer couldn't rest. Waal, ez usual, the perceedin's opened up with er prayer from the parson; 'n' then we hed singin', 'n' it seemed ter me ez if I never hed heerd sich singin' in my life afore ez thet kid let out o' him thet day. Then the parson he started in ter jaw, 'n' I must ellow he giv us a great discourse. I never see him so long-winded afore, tho', 'n' Pete was beginnin' to get mighty restless 'n' oneasy, when all uv a suddint we heerd the door open 'n' shet quick 'n' sharp, 'n' every one turned round to find a great big black-bearded cuss at the door a coverin' the hull gang uv us with a double-barled shotgun, 'n' jest a standin' thar cool 'n' silent. 'Face round here, yer —— —— fools,' yelled somebody in a sharp, quick, biznus-meanin' v'ice, 'n' all hands faced round to find the parson holding 'em up with another shotgun,—own brother to the one the other cuss hed. 'I don't want a word out er yer,' he sed. 'Yer see my game now, don't yer? Thar aint a gun in the house 'cept the ones you see, 'n' if any gent makes any row in this yer meetin' I'll fill his hide so plum full o' holes 't won't hold his bones. The kid will now take up the collection, 'n' ez it's the first one we ever hev taken up yer must make it a liber'l one, see?' The kid started out with a gunnysack, 'n' went through every last man in the crowd. He took everything, even to the rings on our fingers. The parson hed the drop, 'n' we knew it 'n' never kicked, but jest giv' up our stuff like lambs.

"After the kid hed finished he took the sack outside, 'n' thets the last we

ever seed o' him. Then the parson he sez: ''n' now, gents, I must say adoo, ez I must be a travelin', for I hev another meetin' to attend this eve'. I want to say, tho', afore I go, thet you're the orneriest gang of —— —— fools I ever played for suckers. A few friends uv mine hev taken the liberty, while yer've been to meetin' this blessed Chris'mus day, uv goin' through yer cabins 'n' diggin' up yer little caches uv dust 'n' uther valables. Yer stock hez all been stampeded, 'n' yer guns yer'll find somewhar at the bottom of the crick. My friend at the door will hold yer level while I walk out, 'n' we will then keep yer quiet fer a few minutes longer through ther winder jest so 's we can git a nice cumf'table start;' 'n' so they did. What cud we do? The parson walked out, grinning all over himself, 'n' he 'n' his pals they nailed up the door 'n' winders (thar wuz only two), 'n' very soon after they hed finished we heerd the clatter o' huffs 'n' knowed they wuz gone. I must draw a vail over the rest uv thet day's purceedin's, stranger. The langwidge used by ther boys wuz too awful to repeat; but t'was jest ez this parson sed, when we got out o' thet meetin'-house we found every animal on the location gone, 'n' the only arms left wuz knives 'n' clubs; yet we'd hev gone after 'em with nothin' but our hands, but we couldn't follow afoot. How much did they get? I don't rightly know, but not fur frum fifty thousand. The hull camp wuz stone-broke, all excep' Ah Foo, 'n' he wuz the only one uv us hed sense enuff not to tell thet durned parson whar he cached his stuff. Pete 'n' Five Ace wuz so everlastin' hurt at the hull biznus that they shut up the 'Bird o' Prey,' borrowed Ah Foo's sack 'n' left for the Bay to try 'n' find thet parson; but they never did find him, 'n' no one ever heard uv him again.''

TRIOLET.

By James T. White.

THE touch of her dear hand
So sweet and tender:
Ah! how can I withstand
The touch of her dear hand?
Nor can I understand
What charm doth render
The touch of her dear hand
So sweet and tender.

THEOSOPHY: WHAT IT IS NOT.

By Elliott Coues.

Have an extraordinary care also of the late Theosophers, that teach men to climb to Heaven upon a ladder of lying figments.—N. Ward, *Simple Cobler*, page 18.

THE above quaint caution, by an old and almost forgotten author, is timely, now that one of the most audacious, unscrupulous and successful impostors since Cagliostro has lately died, leaving to the world a legacy of doubt about the difference between a Blavatsky's pretensions and the wisdom of God.

Few persons had heard the word "theosophy," and to fewer still was it more than a strange word, whose meaning was to be sought in the dictionary, until a notorious Russian adventuress identified the name of the thing with her own name by a career of systematic imposture which may be said to have fairly opened in 1875 and ended with her death in May, 1891. That Blavatskyism and theosophism are identical is now a popular fallacy so deeply rooted as to be almost ineradicable. But the fact is, that the ingenious woman simply invented a scheme for exploiting herself, and called that scheme "theosophy." That the existing "Theosophical Society," so far as that sham has any actual existence, is merely one of many ways of gambling upon public credulity for private purposes, has been demonstrated repeatedly. But it should not be difficult to separate this particular humbug from any system of religious philosophy to which the name of theosophy rightly attaches. The present writer happens to be familiar with both the true and false systems; and he knows that a few hours spent in looking up the reputable authorities on the subject would enable any one of average intelligence to discriminate between the two. Into the false system lately popularized as a fad he does not propose to enter, because the whole machinery of that hoax has already been exposed, by himself as well as by others.* But the readers of The Californian may be interested and perhaps surprised to learn something of the history and proper significance of the term "theosophy."

How many persons, for example, know when, or where, or for what purpose, "The Theosophical Society" was first established? Did not most imagine that it was first founded in New York, a few years ago, for the purpose of exploiting Blavatsky? But in *Notes and Queries*, 7th series, volume xi, page 127, we read as follows:

"From the end of the year 1783 to the beginning of the year 1788 there existed a society entitled 'The Theosophical Society, instituted for the purpose of promoting the Heavenly Doctrines of the New Jerusalem, by translating, printing and publishing the Theological Writings of the Honourable Emanuel Swedenborg.'"

That these theosophists were Swedenborgians, pure and simple, is evident from their official title and prospectus, of more than a century ago. How far they succeeded in propagating their faith, their representatives of to-day are best able to say. Yet this old Swedenborgian society is comparatively new and modern, as may easily be shown.

Thus the American *Journal of Psychology*, vol. i, p. 546, declares that "Theosophy is but the recrudescence of a belief widely proclaimed in the twelfth century, and held to in some form by many barbaric tribes." It may be quite a shock to some to be thus sent back to the Dark Ages in

* See, for example, Dr. Hodgson's Report in the *Proceedings* of the London Society for Psychical Research; the article by the present writer in the New York *Sun* of July 20, 1890; and Mr. M. D. Conway's recent contribution to *The Arena*.

quest of that which they fancied was a new thing when they caught at a word appropriated by a cunning charlatan from Webster's Dictionary! But let us cite some respectable authorities further.

Dr. H. More, in his "Brief Discourse of Enthusiasm," remarks slyly and acutely: "I have observed generally of theosophists, as of several other men more palpably mad, that their thoughts are carried much to astrology." So the theosophists of his day were the astrologers, to whom astral bodies, and other supposed modern myths of the Mahatmic machinery, were no novelty.

Enfield's "History of Philosophy" states, in critical mood, that "many traces of the spirit of theosophism may be found through the whole history of philosophy, in which nothing is more frequent than fanatical and hypocritical pretensions to divine illumination." He did not profess to be a prophet; but it seems that theosophists of before his time may be matched by some of those who rejoice in the name to-day.

Theosophical speculation is in fact much older than mediæval history. Its tortuous course is easily traced back to its cradle in the opinions of the Neo-Platonists of the third century A. D.—and how much further back we are not now concerned to say.

Thus Ueberweg's "History of Philosophy" divides Greek philosophy into three periods. The third and last of these he styles the period of "the Neo-Platonists and their predecessors, or the predominance of *theosophy*." It is historically established that Ammonius Saccas, who lived about 175–250 A. D., and his immediate disciples, if they did not originate this drift of speculation, at least founded the Alexandrian school of Neo-Platonism. The doctrines of Ammonius were systematically developed by his most conspicuous pupil, Plotinus (204–269 A. D.). The latter was the first to commit to writing those opinions which have reached us in the six "Enneads of Plotinus," as revised and edited by Porphyry (born about 233 A. D.), his pupil and biographer. The six "Enneads" were so called because they consisted of nine treatises apiece, making a total of fifty-four articles on theosophy and kindred topics.

These books of Plotinus were first published in the Latin text of Marsilius Ficinus, at Florence, in 1492, and afterward in Greek at Basel in 1580. Having neither of these versions before me as I write, I am open to correction if I be wrong. But I am much mistaken if the *word* "theosophy," in its Latin and Greek form, and in its application to the Neo-Platonic speculations of the Alexandrian school of the third century, does not first occur in the Enneads of Plotinus. In that case theosophy and Neo-Platonism would be synonymous terms, neither of which is strictly applicable to the set of wild notions now covered by the term "theosophy," as appropriated by Blavatsky and her agents. To be a theosophist is thus simply to be a Plotinist. Yet I doubt that many persons who style themselves theosophists ever heard of Plotinus, or ever looked at one of his books, or ever imagined that this Neo-Platonist and his disciples formed a sort of theosophic society at Alexandria in the third century after Christ, before Christianity had been formally established under the official sanction and by the strong arm of the Roman Emperor Constantine.

In thus insisting upon the genuineness and authenticity of Plotinism as being that body of speculation which reads its title clearest to the *name* of theosophy, I must not be misunderstood to mean that Plotinism is our only example of the *thing* that theosophy really is. A thing and the name of that thing are to be clearly distinguished. A thing may change in all but its name. In which case, the name no longer means what it did before, and may acquire a very different or even opposite signification. "Theosophy" is a case in point. The original connotation of the term

has just been shown; but nearly or quite all of its original distinctive edges and angles have been worn smooth in rolling down the ages, till, like a rounded pebble, it fits nowhere with precision. "Theosophy" is a noun which has been used to label the outcome of many opposing and quite irreconcilable speculations which have but one thing in common, namely, that they proceed from the spiritual or noumenal to the material or phenomenal world. This is the diametric opposite of the method of science, which proceeds from the physical to the psychical aspects of Nature, —or, at any rate, as far in that direction as the evidence of the senses and the logical processes of the mind will carry it,—till it reaches the intellectually unknowable and stops there. Theosophy assumes certain principles without material evidence, and reasons out a system of belief, for better or worse, on *à priori* grounds. Science observes certain facts and infers certain principles therefrom, arguing *à posteriori*, for better or worse, but is generally content with such knowledge as may be thus acquired, and believes little or nothing that cannot be proven. Thus theosophy is the real antithesis and exact counterpart of science. No one who relies upon the evidence of his senses for the sum of his cognitions can be a theosophist in any proper sense of the word. He must believe many things that he cannot candidly profess to understand. He must have ideas—or intuitions—or imaginings—call them what you please, which he cannot submit to the test of observation and experiment; which he cannot prove to be true, because by their very nature they are not logically demonstrable; yet he must assume them to be true in the absence of evidence to the contrary; and upon them he must base his beliefs, construct his philosophy, weave his ethics, regulate his conduct, and stake his religion. His theosophy, to be worth anything, even to be worth the name, must be at once a church invisible and a bible unwritten, both infallible for him, because of their origination in what he believes to be the divine in his own nature, and, therefore, a revelation of the God in man.

The fairness of the above statements I judge to be scarcely questionable; and the point I strive to make is the very soul or spirit of every theosophy, however variously embodied in different places, at different times, and in many different persons. And obviously it is not to the prejudice of the theosophical character of any system of belief that it should be groundless, or even grounded in error. It is only necessary that a theosophy, to be theosophical, should proceed upon the method above said, whatever the outcome of such procedure may be. Theosophy requires consistency with nothing but itself; perhaps no man's theosophy is exactly like that of any other man. A man may be sadly mistaken in much simpler matters than the fundamental problems of religious philosophy; and *à fortiori* his theosophy may be all wrong. He may be hallucinated; but, if his hallucinations appeal to him with the force of fact, he is a genuine theosophist. His "dream of the shadow of smoke" is thoroughly theosophical if he believes it to be true. His trances and ecstasies, his rapt contemplations, are theosophical as long as they last; and his rhapsodies concerning them are not necessarily fictitious.

If one imagines that he sees God and has converse with a celestial hierarchy,—so he does, "theosophically" speaking, as long as he remains in that particular state of mind. But there can be no objective evidence of the verity of a subjective condition; the witness in the case is competent to testify only in the court of his own soul, from which there is no appeal to the reason or the senses of any other person. Hence it is, in the nature of the case, impossible to formulate a theosophical creed; impossible to impart or receive theosophical doctrine;

impossible to organize an actual theosophical society; and, in fact, impossible to say what theosophy really is. If any of these things should prove possible, they might be desirable, and they might be true enough to some extent; but were they so proven they would by that very fact cease to be "theosophical" and become scientific.

So we are confronted with the seeming paradox, that the truest theosophy is most repugnant to the evidence of the senses, and rests upon the least possible basis of fact. As a matter of fact, theosophy is not true; as a matter of faith, it is indisputably true; because, the proof and the disproof being alike wanting, it cannot be called in question. It follows that those who think they understand the subject, in an intellectual sense, deceive themselves; and those who profess to teach any formal theosophical doctrine deceive others. A shrewdly devised system of theosophy lends itself, perhaps more readily than any other form of imposture, to the purposes of knavery and charlatanism. Its mystical jargon, its mythical phenomena, and its promises of marvelous powers attainable—but never attained—constitute a machinery of delusion whose force of action cannot easily be resisted by the ignorant and credulous minds against which it is directed, and for which the mysterious and the miraculous have boundless charms. The trickery which appeals to popular superstition is never more forcible, more plausible or more successful than when operated in the guise of religion. Hence religious impostors always select some sort of theosophical vagaries as the best means to their ends. The case of Blavatsky is by no means singular. It is typical of a class of cases. She became notorious, not because there was anything peculiar in what she called her theosophy, but because of her peculiar talent for hoaxing by means of theosophy. The same methods of gambling upon popular credulity, by strictly theosophical pretensions, are adopted and followed with more or less success by numberless sham reformers, bogus prophets, self-styled Messiahs and would-be saviors of the world.

My insistence that theosophy is to be judged, not by the truth or the falsity of its assumptions, and not by the good or bad results of those assumptions, but by the fact that it makes certain assumptions, and proceeds upon them in a certain fashion, may seem so strange—even so absurdly "theosophical"—that I will fortify my contention by citing some recognized authorities. As already hinted, the word "theosophy" has acquired by usage a tolerably exact definition for students of history and philosophy. What is the word taken to signify by those best qualified to decide upon its meaning? Who have been accepted as the world's great theosophists? What manner of persons have they been, what did they believe, and where can we find an account of their views?

All the dictionaries before me define the word. The Century Dictionary seems to me to give the best formal and technical definition, which is accordingly selected. The etymology states that the word is from the low Greek *theosophia*, literally meaning "knowledge of divine things," or "wisdom concerning the things of God." *Theosophia* itself is from the Greek *theosophos*, meaning "learned or wise in things divine;" and the latter is compounded of *theos*, "god," and *sophos*, "wise." The definition then proceeds as follows:

"Knowledge of things divine, a philosophy based upon a claim of special insight into the divine nature, or a special divine revelation. It differs from most philosophical systems in that they start from phenomena and deduce therefrom certain conclusions respecting God, whereas theosophy starts with an assumed knowledge of God directly obtained through spiritual intercommunion, and proceeds therefrom to a study and explanation of phenomena."

That is all,—but it is complete. Not another word is needed for definition. The reader may thus be satisfied that, as already claimed, theosophy does not depend for its validity upon the truth or error of its assumed knowledge of God, but upon the fact of making the assumption of that knowledge; and that it does not depend upon the truth or error of its explanation of phenomena, but upon the fact that it proceeds to study and explain phenomena from its own assumed standpoint.

In the next place, let us inquire, Who are theosophists in any proper sense? Many persons of late have so styled themselves. But their names are never heard above the din and jangle of their own vociferation. A few have been recognized as true theosophists by men of great erudition and sound judgment. I cite some of the historically famous names from Brande and Cox's Dictionary of Science, Literature and Art:

"Theosophist [is] a name which has been given, though without any very definite meaning, to that class of mystical religious thinkers and writers who aim at displaying, or believe themselves to possess, a knowledge of the Divinity and His works by supernatural inspiration. * * * The best known names at this day of the theosophic order are those of Jacob Boehme, Madame Guyon, Swedenborg and Saint-Martin. Schilling and others, who regarded the foundation of their metaphysical tenets as resting on divine intuition, have been called theosophists, but with less exactness."

Another Encyclopædia of high repute (that of Schaff-Herzog, p. 2,348) gives a characterization of theosophy parallel with the above:

"Theosophy is distinguished from mysticism, speculative theology, and other forms of philosophy and theology, to which it bears a certain resemblance, by its claims of direct divine inspiration, immediate divine revelation, and its want, more or less conspicuous, of dialectical exposition. It is found among all nations,—Hindus, Persians, Arabs, Greeks (later Neo-Platonism) and Jews (Cabala),—and presents itself variously under the form of magic (Agrippa of Nettesheim, Paracelsus), or vision (Swedenborg, Saint-Martin), or rapt contemplation (Jacob Boehme, Oettinger)."

A word from the latest edition of the Encyclopædia Britannica:

"It is characteristic of theosophy that it starts with an explication of the divine essence, and endeavors to deduce the phenomenal universe from the play of forces within the divine nature itself."

Thus neither the authorities cited, nor my own investigations of the subject, suffice to explain exactly what theosophy is. They rather serve to show what it is not, and thus justify the title I have selected. Theosophy is certainly *not* the elaborate, concerted and grotesque system of imposture to which the name now attaches in popular apprehension. But just as the circulation of a counterfeit implies the existence of the genuine coin, and the casting of a shadow the presence of a substance, so does the very mockery of a Blavatsky serve to suggest that there may be a theosophy with the true ring, worthy of all the name implies. In essaying to construct for ourselves any system of eternal verities, let us beware of attempting to scale high heaven by "a ladder of lying figments."

THE RECENT REVOLUTION IN CHILE.

By Lieut. George L. Dyer, U. S. N.

ON the seventh of January, about one year ago, the Chilean squadron, then lying in the harbor of Valparaiso, having on board among others the Vice-President of the Chilean Senate and the Speaker of the House of Deputies, in defiance of the orders of the President of the Republic declared itself in open rebellion. This was the first act of war against the government de facto of that country, which resulted in the downfall of José Manuel Balmaceda, and the cause he endeavored to uphold, at the battle of Placilla, seven months and a half later.

The multitudinous incidents which led up to this catastrophe have not been sufficiently comprehended by the outside world to enable any just appreciation to be formed of their merits. A very well-informed writer in the *Revue des Deux Mondes*, with an unqualified leaning toward the side opposed to the President, and called Opositor for that reason, some time after the revolt of the squadron stated that he could discover no adequate reason for the revolution. This was the general opinion of the many foreigners of several nationalities whom I met during the six months stay of the *San Francisco* in the several Chilean ports from Arica to Valparaiso. I was never able to find a foreigner, no matter how long had been his residence in the country, who was able to assign any reason satisfactory to himself for the revolt against the authority of the President.

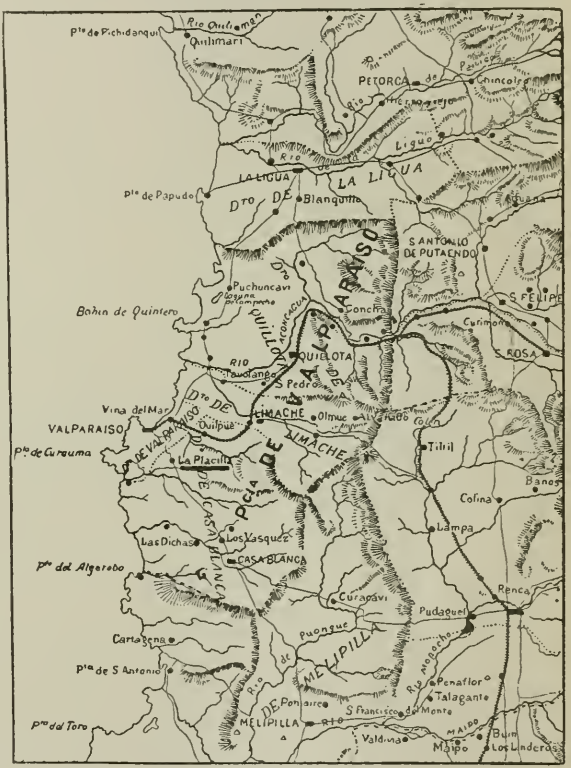
When the *San Francisco* arrived in Iquique on the 10th of last May the revolutionists had possession of all the provinces from the southern boundary of Peru as far south as the small port of Huasco, which lies about three hundred miles north of Valparaiso. In other words, they held about seven hundred miles of seacoast, and all the nitrate country, which gave them large revenues for their undertaking, but a somewhat limited field for recruiting. They had secured these provinces by means of their undisputed control of the sea, which made it impossible for the President to send large reinforcements at one time to any of the small garrisons in the seaports. With the means at their disposal the revolutionists were able to defeat the small detachments of loyal troops in the north, and either defeat or drive out of the country, into Peru, Bolivia and Argentina, the reinforcements which were landed at various points. After seven sanguinary fights, ending with the battle of Pozo Almonte, but a few miles from Iquique on the railroad leading to the nitrate factories the President ceased to dispute the possession of these provinces, withdrew his last expedition to Coquimbo, and addressed himself entirely to the task of preparing to receive his enemies in the provinces, except Coquimbo, connected with the capital by rail. He never relinquished the intention of making an aggressive campaign, but the means of transportation at his disposal were so inadequate that he could do nothing further until the arrival of the two small cruisers building in France. These, with the two torpedo cruisers *Lynch* and *Condell*, the transport *Imperial* of the Chilean Company subsidized by the Chilean Government, and a large and fast Italian steamer purchased in Buenos Ayres just at the close of hostilities, would have put his naval force on terms of equality with his adversaries. Their agents in Europe were very successful in delaying the departure of

the cruisers, and contributed materially to the downfall of the President by this means.

The revolutionists in Iquique also felt that their success depended on an aggressive campaign, which they knew must be undertaken before the arrival of the *Presidentes*, as the cruisers were called, *Presidente Errázuriz* and *Presidente Pinto.*

The flagship *San Francisco* reached Iquique just as the telegraph announced the escape of the *Itata* from San Diego and the pursuit by the *Charleston*. The Chilean naval officers were much depressed by this news. Their prospects at this time were not flattering. As a result of the several battles and a careful collection of all the firearms in the provinces under their control, they had gathered about four thousand rifles of various make and caliber, for which they could manufacture ammunition in Iquique. They had, it is true, about four thousand Mannlicher rifles which had been taken from a transport about the time they left Valparaiso; but they had no ammunition for these arms, and no prospect of getting any for some time. They had counted on the arms to be brought by the *Itata*, and they felt that their cause would be seriously imperiled by the attitude of the United States.

Immediately after the success of Pozo Almonte, and the practical relinquishment of further efforts on the part of the President to secure a foothold in the north, there had been considerable enthusiasm among the lower classes, and many joined the army. When it became evident to these men that there were no arms, no ammunition and no clothing, practically, and the prospect of getting any was very indefinite, they deserted in large numbers, so that in May the leaders of the revolution, especially after the receipt of the news of the *Itata*, were much discouraged. Admiral Brown immediately set about informing himself thoroughly of the whole situation. He was indefatigable in visiting every point and in communicating constantly with the leaders of



Map of the Seat of War.

the revolutionary movement. They put him in full possession of all the facts relating to their position, their expectations, and their plans for the future; and there can be no possible doubt at this time of their entire confidence in his absolute neutrality and their satisfaction at his perfectly impartial attitude. When the official news of the sailing of the *Itata* was received, and it was known all over the world that the United States ships

were ordered to capture and return her to San Diego, as a result of his previous negotiations the Junta immediately wrote to Admiral Brown that the *Itata*, with all the arms and ammunition taken from the *Robert and Minnie*, should be delivered to the United States just as soon as she could be communicated with, and that the Admiral should determine the manner and time of her delivery.

This practically closed the *Itata* incident, as it was quite evident that the Junta was acting in good faith. The arrival of the *Baltimore* with Admiral McCann, the subsequent coming of the *Charleston*, made no change in the arrangements already perfected. The *Itata* was delivered in the manner agreed upon, and the revolutionary Junta saw her depart with many misgivings, as it delayed the day of aggressive operations indefinitely. The insurgent press had been quite moderate until the arrival of the *Itata* in Iquique. As soon as it became evident that the United States was thoroughly in earnest, its tone changed to one of hostility, finding fault with our Government for its actions, and making an outcry at what it called the great force displayed to bully a weak power which claimed to be fighting for constitutional liberty. From that time until the present the Chilean press devoted to the revolution has not ceased its adverse criticism of the attitude of the United States, nor refrained from attacking the officers of our Government who have been the civil and naval representatives at the capital and in the waters of Chile.

Early in June the squadron dispersed, the *San Francisco*, after a short visit to Arica, stopping at Pisagua, went south to Coquimbo, visiting the ports of Antofagasta and Caldera. A good opportunity was thus presented to study thoroughly the position and resources of the revolutionists, which at this time were about as follows: There were in Iquique less than two thousand men under arms. At all the other ports together there were not three hundred men. Recruiting had stopped, practically, and there were constant desertions. The sales of nitrates brought in a large supply of money, which gave and supported credit abroad, and made the continuance of the struggle possible. Large supplies of provisions came to Iquique, so there was no lack of food. Clothing was scarce, and so were arms and ammunition. The squadron was kept on the alert by the torpedo cruisers *Lynch* and *Condell*, and the officers and crews were pretty well disheartened by the prospect of an indefinite extension of their wearing but necessary vigilance. The Opositores in hiding in the south were complaining of their lack of enterprise. A movement of some kind was urged to give new life to the cause. The leaders were accused of tarrying in their position of absolute security for the purpose of enjoying for a longer period the fat revenues from the sales of nitrates, while their fellow revolutionists in the south claimed that they were being persecuted in all sorts of fiendish ways by the tyrant Balmaceda.

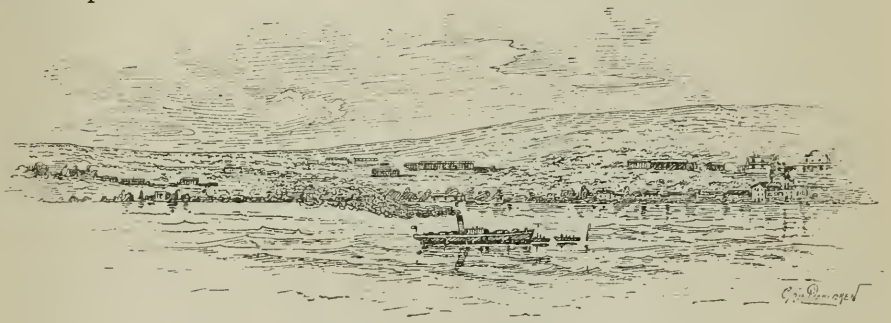
The revolutionary Junta had determined, therefore, to move before the arrival of the *Presidentes*, relying upon disaffection in the Government army and the accession of large numbers favorable to their cause as soon as they could effect a landing at some point near, or south of, Coquimbo. As it was the inclement season, and the men lacked proper clothing, it was desirable to put off the movement as long as possible.

The desert of Atacama separates the nitrate regions of Chile from the agricultural portion. It was impossible for the President to send an expedition by land across this impassable barrier, or for the friends of the revolution to join the army at Iquique, except as fugitives in the north-bound steamers. Many succeeded in eluding the vigilance of the authorities, and reached Iquique in this way. A few crossed the Andes into Argentina, and recrossed again

into the province of Copiapó and at other points, suffering many hardships and undergoing much danger in the effort. These men, who, as a rule, belonged to the best families in Chile, were eagerly welcomed and given positions at once in the army.

The difficulties of getting out of the country precluded the possibility of sending any men for the ranks from the south. These were recruited entirely from the nitrate works and mines of the north.

As the flagship went slowly south it was seen that the hold of the revolutionists on the ports south of Iquique was a very weak one. All were practically defenseless. Only the limited resources of the President for transportation prevented his sending troops and men as a body had gone with the revolution, while the rank and file of the army had remained loyal. The few naval officers who were not carried away by the tide of feeling did splendid service for their chief, and contributed their full share in sustaining his authority. The difficulties they had to overcome in getting engineers and machinists to handle and care for the complicated machinery of the torpedo cruisers, in training men to work the torpedoes and machine guns, and the risk they ran at all times from a very vigilant and merciless enemy, can scarcely be understood. They had agreed among themselves, at the commencement of the war, to limit their duties to the transportation of troops and material, and had made that stip-



Caldera, Showing Site of Wreck of "Blanco Encalada."

to all of these places. His one transport, the *Imperial*, could carry but two regiments, two thousand men at most; and these could be overwhelmed, long before reinforcements could arrive, by the troops from Iquique with the aid of the squadron and the seven or eight efficient transports in the hands of the revolutionists. The *Imperial* with the two torpedo cruisers succeeded in eluding the vigilance of the squadron on several occasions; but it was always an extremely hazardous operation and they had many narrow escapes.

It may be said here that the three vessels forming the flotilla of the Government were extremely well handled. The defection of the squadron had deprived the President of the assistance of the navy. The officers ulation with the President, who then approved of their decision. After the attempt of a launch from the *Blanco Encalada* to destroy the *Imperial* with a torpedo, in the harbor of Valparaiso, in the early part of the difficulty, they saw their generosity would not be appreciated, and henceforth they treated their opponents as enemies. After the destruction of the *Blanco Encalada* in the harbor of Caldera by the torpedo cruisers, their officers knew well enough that if caught their lives would be forfeited at once. With one exception they impressed the officers of the American ships as being brave, intelligent, capable and very modest men, who were fully aware of the risks of their position, but who were entirely honest and earnest in their belief in

the justice of the President's cause. The story of the repeated and successful efforts of the *Imperial* under Fuentes and Garin to land troops in the north, their narrow escapes from the revolutionary squadron, and the daring and successful attack of the *Blanco Encalada* by the torpedo cruisers *Lynch* and *Condell* under Fuentes and Moraga, makes a very lively contrast with the operations conducted on terra firma.

At Coquimbo we encountered the first troops devoted to the cause of the President. It was evident at once that the preparation, the efficiency and the enthusiasm of these men were far greater than of those we had just seen. It was then believed that the first landing of the revolutionists would be made at this point. Believing this, the President had concentrated a fine division of about nine thousand men of the three arms in the province of Coquimbo, making it sufficiently strong to protect itself without hope of assistance. The country between the Bay of Coquimbo and the most northern point reached by the railroad system of Chile is exceedingly rugged and difficult. The troops which marched overland from Santiago to join the Coquimbo division were about two weeks on the way. This division, therefore, was practically isolated, and understood it must stand or fall without assistance when the trial should come.

The condition of these men, whom we saw for weeks under all the conditions possible in that faultless climate, was unquestionably fine. They were well fed, well dressed and well drilled. But few were kept in the cities or towns, and these were frequently changed. The main body was quartered in cantonments in the country, where the officers and men were constantly under instruction. They were brought together often on a large plain to the south of Serena, the largest city in that province, for exercise in sham battles, and to determine the rapidity with which they could be concentrated. There was no lack of enthusiasm, nor was there any evidence of disloyalty. The reports for July, the month preceding the battles, showed no desertions from the regular infantry regiment, the Zapadores, of twelve hundred men, and eighteen from the regiment of cavalry of four hundred men, these two regiments making the best and worst showing respectively for that month.

The principal officers of the division reconnoitered the whole country thoroughly, and all were heartily wishing that the landing would be made in that province. Every indication pointed to this, and the American, English, German and French squadrons gathered in the capacious and well-protected Bay of Coquimbo to witness the expected attack.

In the early part of July one of the revolutionist transports, the *Maipo*, returned to Iquique from a successful trip to the Straits of Magellan, where she received from a steamer a large shipment of arms and ammunition sent out from Europe. This acquisition restored the flagging spirits of the insurgents, who immediately renewed their recruiting with great vigor and success. The enthusiasm spread among the laboring population of that region, and in a comparatively short time their force had reached the respectable figure of nearly five thousand men, whom they were now able to arm as fast as enrolled. They organized the force into a division of three brigades of infantry, with a small force of cavalry and artillery, and pushed ahead their preparations for the coming expedition with great rapidity. In their organization and instruction they owed much to a German officer named Körner, who had been in the General Staff of the German army. Körner had been recommended to the agents of the Chilean Government in Europe before the war as a suitable instructor for the advanced course of tactics and strategy the President desired the officers of the army to pursue. At the outbreak of the revolution it was sup-

posed he would remain neutral, but he soon joined the Junta at Iquique, and placed himself at their disposal. He seems to have acted with great tact and modesty, overcoming gradually the natural prejudices of the superior officers against himself as a foreigner, and against the new system he labored to introduce. The Chileans still adhered to the old-fashioned style of fighting in close order, and depending largely on the use of the bayonet. After great efforts Körner succeeded in convincing the most obstinate that with modern arms this system was out of date; and by the exercise of extraordinary patience he appears to have won the respect and affection of all.

As Chief of Staff, the place for which he was eminently fitted, by intelligence, education and experience, he contributed more than any one man to the phenomenal success of the Chilean revolution.

The agents of the Junta in Europe were unable further to delay the departure of the *Presidentes*, and it became necessary to make the long premeditated start. In the latter part of July, therefore, the first movement was made to Caldera, roughly speaking four hundred miles north of Valparaiso. At this time, after much study and many discussions, and by a vote of the principal officers, the determination had been reached to attack the Balmaceda division at Coquimbo. About all the available men north of Caldera had been gathered up without crippling the nitrate industry. This was necessary for the revenues, and the interference with it would have brought about complications with the English, the principal owners of the factories. The province of Copiapó, of which Caldera is the seaport, had not yet been drawn upon largely for men; it was but two hundred miles from Coquimbo, the objective point. Caldera would be easily protected against incursions from the torpedo cruisers, and the mines in that region could be stripped of men without affecting materially the financial condition of the revolutionary party. There was much enthusiasm here also, and the army speedily swelled to nearly nine thousand men. Many of these landed at Quinteros in their civilian clothes, and with but the little instruction which the officers were able to give during the passage down on shipboard.

While at Caldera information was received that a plan had been perfected in Santiago, by the revolutionary committee in hiding there, to destroy the communication between Santiago, Concepcion and Valparaiso to prevent the concentration of the divisions of each at these places. About one hundred and fifty young men, many of them belonging to the best families in Santiago, had banded together and were all prepared with arms, materials and tools to destroy the bridges and tunnels, cut the telegraph and telephone wires, raise a riot in the capital, and prevent the division there from going to the assistance of the troops at Valparaiso. So certain were they of carrying out this scheme that the plan of going to Coquimbo was given up, and it was determined to land at Quinteros, but eighteen miles north of Valparaiso, and attack the division at the seaport, which was known to be numerically less than the revolutionist force. I was assured afterwards by a member of the Junta that this hazardous undertaking would not have been attempted had they had the slightest doubt about the success of the Santiago conspirators. It would have been an inconceivable folly to have landed nine thousand more or less undisciplined men at Quinteros in the face of more than twenty thousand seasoned and drilled troops of the Government, which could be concentrated in their chosen positions, no matter what the direction of their opponents' march. The conspiracy failed, for the band was destroyed at Lo Cañas the day before the landing at Quinteros; and there was no delay whatever in the concentration of the Concepcion and Santiago divisions in the vicinity of Valparaiso.

The destruction of the band of guerrillas in the vicinity of Santiago at Lo Cañas, a ranch belonging to one of the leaders of the revolution, has been held up to the whole civilized world as one of the most atrocious acts of barbarism ever committed. It must be remembered, however, that this was a well-organized plan to cripple the action of the Government at a moment when it would be fighting for existence, and by means which would inevitably result in the destruction of innocent human life. The band was attacked, and resisted, and many were killed. Others were afterward tried by court-martial, confessed their guilt, and were executed. The details of the attack and execution were reported as shockingly cruel; but the fact of the intention and preparations of these young men certainly placed them outside the category of ordinary conspirators.

Early on the 20th of August it was reported everywhere about Valparaiso that the revolutionists had commenced at daybreak to land at Quinteros. It had been currently rumored also, for a number of days before, that the landing would be effected within forty-eight hours after the cruiser *Esmeralda* should fire three shots off the harbor. This was done on the 18th, although no one believed it signified anything at the time. There had been so many falsehoods circulated by both sides, with the apparent sanction of the highest authorities, that the story of the landing at Quinteros was not entirely credited. To be able to inform his Government of the facts at the earliest possible moment, Admiral Brown got under way in the *San Francisco* and steamed around to Quinteros, where he saw the whole force of the revolutionists either on shore or in scows preparing to land. His object being simply to verify the report in a general way, he kept at a distance during his observation, and having satisfied himself of the fact he returned to Valparaiso. A dispatch in cipher was immediately prepared, which I took to the Intendente, Admiral Viel, for his official authorization, this being the scrutiny to which all telegraphic messages were subjected at that time. The Intendente, who was very busy and much excited, as a matter of courtesy did not require the translation of the cipher; and he consequently could have had no knowledge of the contents of the dispatch. This is all there is of the Quinteros incident which has been magnified to such a degree by the Chilean press.

As fast as the troops set foot on land at Quinteros they were pushed on to the banks of the Aconcagua River, some miles in the direction of Valparaiso. Before daylight on the 21st the little army was drawn up on the northern bank opposite the fords of the river, ready to cross when the order should be given.

The army of President Balmaceda was composed of four principal divisions: The First or Santiago Division of 6,000 soldiers, commanded by Major-General Orozimbo Barbosa; the Second or Valparaiso Division of 7,000 men, Brigadier General José Miguel Alcérreca; the Third or Coquimbo Division of 9,000 men, Colonel Carvallo; and the Fourth or Concepcion Division of 10,000 men, commanded by Colonel Daniel Garcia Videla, an approximate total of 32,000 men.

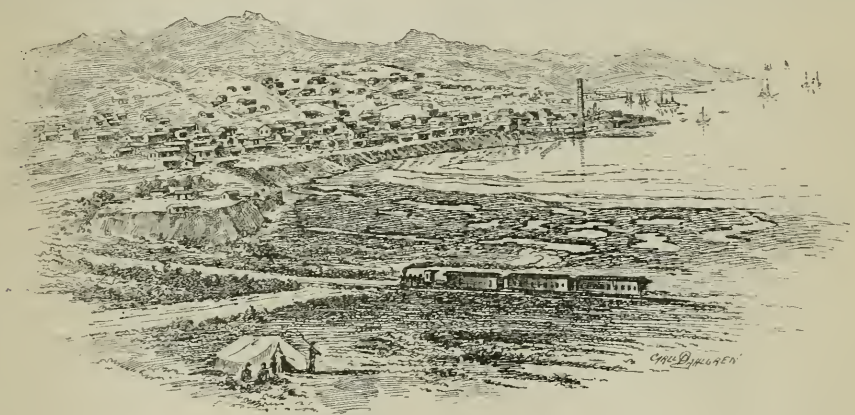
The plan of the President was to keep a division in each one of the principal centers of population nearest to the sea. Serena is the capital of the north, Concepcion is the capital of the south, and Santiago and Valparaiso are the two most important cities of the republic. Valparaiso is a seaport, Serena and Concepcion are but a quarter of an hour distant from the sea, and Santiago can be attacked by way of San Antonio or by way of Valparaiso. The other populous cities of Chile, like San Felipe, San Fernando, Curico, Talca, Angel, Rancagua and others, are very far back from the coast, and there are no practicable landing places in their vicinity.

This was the general plan of national defense.

Passing now to the plan of military operation, the President took into consideration two cases, first, a landing at Coquimbo, and, second, a disembarkation at Valparaiso, San Antonio or Talcahuano.

In the first case the Coquimbo troops would have to fight without aid, and, in the remote contingency of a defeat, would have to fall back on Santiago by way of Combarbalá, Illapel and Calera. In the second case the generals had express instructions *not to risk a battle* until the arrival of the other two divisions, easily effected on account of the railroads reaching Valparaiso, Santiago and Concepcion. The divisions of Santiago and Valparaiso could be concentrated in ten hours, and that of Concepcion, at Santiago, in twenty-four hours, and at Valparaiso in thirty. The only division that could not be reinforced nor come to the aid of the others with rapidity was that at Coquimbo. If the President had had control on the sea he could have sent aid to that division, or reinforced others with it, in twenty-four hours, but not having that control at least fifteen days would have been necessary for the march by land across mountains, deep gulches and high hills.

The concentration of the Santiago, Valparaiso and Concepcion divisions was intended to avoid the shedding of blood. Among the three divisions there was a total of 23,000 men. Deducting garrisons, there remained an effectual force of 20,000 soldiers, well armed, disciplined and provided with ammunition. The revolutionists had but 9,000 men. It was evident that the plan of concentration contemplated did not admit of a bloody battle. The enormous disproportion of the number of troops would have avoided that. To bring about the concentration the necessary trains were held in Santiago, Valparaiso and Concepcion in order to transport the disposable forces of each division at a moment's notice. A cordon of troops, gensdarmes, police and pontoniers guarded the railroads and bridges of strategical importance. The telegraph lines were also carefully watched.



Coquimbo from the Land.

At daybreak on the 20th of August the President gave orders, first, to General Alcérreca, to advance to the Aconcagua River and worry the enemy while the three divisions were being concentrated; second, to General Barbosa to send forward his troops; and, third, to bring to Santiago and Valparaiso the Concepcion division. Alcérreca moved a portion of his division on the same day, the 20th, to

the line of the River Aconcagua, a few hours distant from Quinteros. A part of the Santiago division, with General Barbosa, arrived on the line the same day, and before midday the first detachment left Concepcion. The 20th passed without further change.

On the 21st the revolutionary army was in Concon, the point where the River Aconcagua empties into the sea. During the forenoon there was an artillery duel, and at noon the battle commenced.

General Alcérreca concluded to fight, although he had in line but 6,500 men. He waited neither for the Concepcion division of 10,000 men coming rapidly by rail since noon of the day before, nor for five battalions of the Santiago and Valparaiso divisions on the march from Viña del Mar, numbering 2,550 men. The rest of the Santiago and Valparaiso divisions remained in those populous cities to keep order. The regiment, Artillery of the Coast, remained in the forts to repulse an attack by the squadron.

The line of battle occupied by the Government troops had four serious disadvantages; first, it was near the sea and exposed to the fire of the ships; second, it could be attacked from the rear by troops disembarked at Reñaca; third, there were deep gulches which broke the unity of the line and made it impossible for the wings to aid each other; fourth, it was very extensive, being placed more to oppose the passage of the river than to engage in battle.

Add to this that the troops went into the fight with only one hundred rounds per man; that the service of the ammunition train was made very difficult; that the artillery for this reason was very soon out of ammunition; that the cavalry had very little opportunity for action; and that the question of command between the generals had not been definitely decided.

The fact is the battle of Concon was fought contrary to instructions. The line chosen by the President was that formed by the heights of Viña del Mar, and *not* by the River Aconcagua; and the incidents were precipitated because the generals did not wait for the large reinforcements rapidly coming to them.

To keep the public order after the defeat it was necessary to leave in Santiago and the south five regiments and small detachments of other bodies.

As a result of the panic produced by the rout of Concon, and the natural difficulties of quick concentration, the revolutionists could have taken Valparaiso the same day, or at daybreak on the 22d, but they were either much disorganized or did not wish to take the risk. They did not pursue their enemy, nor molest him in any way during the whole night of the 21st, nor during the day and night of the 22d. They allowed him, without opposition, to effect his concentration of troops; did not cut the railroad at Quilpue, Limache, San Pedro or Quillota, all less than six hours distant from Concon, by cavalry, which would have prevented the Concepcion division from reaching Valparaiso. On the 22d they did not attack Valparaiso, practically undefended, as the bodies of troops there were badly demoralized and widely separated. They did not even try to surprise Quilpue, which was the rallying point of all who retired from Concon and who had no ammunition. They did not attack Fort Callao with the squadron before the Government line was established, nor did the ships shell the heights of Viña del Mar while the Government troops were taking their positions very slowly. And, finally, the squadron did not stop the *Lynch*, which entered the harbor on the night of the 22d, bringing 500,000 rounds of ammunition from Coquimbo,—a fortunate addition, as the troops from Concepcion and the others also had scarcely one hundred rounds per man.

At 6 o'clock P. M. of the 22d the last detachment of the Concepcion division arrived. In the mean time, from the morning of the 22d, the revolutionists rested in their position in

front of Viña del Mar. The most advanced troops exchanged shots occasionally, and now and then made a weak feint at attacking.

At daylight on the 23d the smoke of the large campfires fixed the extremes and depth of both lines. The right of the revolutionary army extended to the sea. Back of it were a series of ravines which form the skirts of the rugged hills of the coast range. The center and left rested on the heights which, commencing almost at the seaside, surround the town of Viña del Mar towards the interior limit of the creek of the same name.

The army of the Government extended from Fort Callao along the most elevated crests of the heights of Viña del Mar. The right wing projected beyond the main line to prevent an advance on Valparaiso, on the side of Las Zorras. Fort Callao is situated on the top of a large knob which touches the sea on one side. Behind it lies the town of Viña del Mar. On the side of the sea the position was defended by two nine-inch guns. All of the field artillery of the Government, consisting of sixteen Krupp pieces and two Hotchkiss revolving guns, was placed outside of the range of the guns of the squadron. Both armies were separated by the creek and town of Viña del Mar.

At sunrise the squadron, composed of the *Cochrane*, *Esmeralda*, *O'Higgins* and *Aconcagua*, was lying off Concon, although not visible to the naked eye. At 7:10 a part of the Government field artillery commenced firing, and this was shortly afterward returned. The squadron then advanced, and Fort Callao fired the first shot at about 8,000 yards. The artillery fight became general, and the infantry of both armies looked on in silence. The shots of the revolutionary squadron and artillery destroyed a few houses in Miramar. The three hundred discharges only wounded four people slightly.

The artillery of the Government under Colonel Fuentes fired effectively in return; and after a cannonade of about two hours the revolutionists fell back rapidly. The squadron, evidently disinclined to take risks, followed this example, withdrawing to Concon. During the bombardment the other four forts in the harbor assisted Fort Callao whenever practicable.

In view of the strong position held by the Government troops the revolutionists modified their plan of assaulting Valparaiso from the side of Viña del Mar, and employed the remainder of the day in breaking up their line of battle and concentrating upon their rear guard. The torpedo cruiser *Lynch* left her moorings, and for a short time, under the protection of Fort Callao, bombarded the heights occupied by the revolutionists. The squadron paid no attention to her.

The whole of the 23d was passed by the revolutionists in making feints with their advance guard to cover the actual concentration of the main body. It looked as if they meant to retire to Concon, but in reality they did not abandon their positions. In the mean time the artillery belonging to the Concepcion division left Quilpue with its large train of ammunition, and arrived by rail at Valparaiso, passing very near the left flank of the enemy. The cavalry of the Concepcion division never reached Barbosa's army. While on the march from Quilpue one squadron of two hundred lancers and the commanding officer deserted, taking the road to Concon, and joined the cavalry of the enemy. The remainder, unable to join Barbosa, returned to Quillota.

At daybreak on the 24th the army of Barbosa still kept the position of the night before. The revolutionists, on the contrary, while preserving the appearance of maintaining their line, were really making movements hidden by the hills. The fact that neither army nor squadron made any hostile manifestation awoke suspicion in the minds of the staff of General Barbosa, and a series of reconnaissances in force were immediately commenced and

carried on during the whole day. These demonstrated absolutely that the revolutionists were going from Viña del Mar towards Salto and Quilpue. It was certainly proved that General Canto left no troops on his line on the 23d, and that he was definitely marching around the hills toward Quilpue. It was generally agreed also that the enemy had commenced a movement around Valparaiso in order to attempt to enter without firing a shot after having deceived the Government army by movements, apparently disorderly, and of double strategical signification. As the rain continued falling heavily, it was resolved to wait until the following morning before undertaking definitely the march by the right flank. Barbosa's troops slept at their posts exposed to the bad weather, while the revolutionists sent their troops down from the heights and lodged them in the houses and pretty suburban cottages at Quilpue.

On the morning of the 26th the weather was beautiful. A council of war of the commanding officers was held at Barbosa's headquarters. Plans were analyzed, the reports of all the reconnaissances were read, the officers who had made them were heard, and it was agreed to commence the march on Placilla during the afternoon. To deceive the enemy it was determined to leave burning the usual campfires and to conceal the line of march as much as possible by means of the inequalities of the country. Profound silence was guarded, the soldiers were kept from smoking, and the cavalry was kept at some distance from the infantry. The artillery was put on the railroad trains at Viña del Mar and transported to Valparaiso, to be sent in the morning to occupy the hills back of the city, which lie in front of Placilla. It was ordered also that a small detachment of infantry and artillery should occupy Placilla and the hills around during the night to prevent any unforeseen advance of the revolutionists. In order to understand better the situation, it will be useful to describe the theater of operations of both armies.

General Canto's troops marched on the arc of a circle which, starting from Viña del Mar, followed the rugged hills of Salto, crossed the elevations of Quilpue, passed through the town of the same name, and then fell with a gradual slope through the fine plantations of Las Palmas and La Cadena, and entered Placilla along the skirts of the low hills which continue through Las Tablas to Laguna and Valparaiso. The army of Barbosa took the chord of this arc, marching by the right flank. It had to ascend and descend very large and deep gulches, cross a swamp and reach Placilla through the plantation of La Ceniza.

The strategical importance of Placilla is seen at once. It is the key to Valparaiso. All the roads that lead from the coast join in this village. An army that does not assault Valparaiso at Viña del Mar, aided by troops landed at La Laguna, also at the seaside, must of necessity go through Placilla. This is the junction of roads leading out of Salto, Quilpue, Viña del Mar, Casa Blanca, and of all the towns extending towards Melipilla and Santiago. In a word, the army which is master of Placilla is master of Valparaiso. It will be readily understood, therefore, why both armies marched in great haste to occupy this village.

The army of Barbosa commenced its march at 3:30 P. M. from the right wing. The ground was moist, swampy part of the way, with dangerous footing here and there, and with deep holes filled with water. It soon became dark, and the night was black and damp. The moon did not rise until 2 o'clock on the following morning. The troops marched silently along, overcoming great difficulties in climbing up and down deep gulches, following paths flanked by dangerous precipices, in crossing muddy bottoms, in passing through marshes and pools of stagnant water, in groping through

dense woods, and in marching in single file through the great swamp on the plantation La Ceniza.

Just at daylight on the 27th the staff of Barbosa reconnoitered, and proved that the enemy was encamped on the plantation La Cadena, a short distance from Placilla. The mass of his troops was hidden in breaks in the low hills, the cavalry was in plain sight, and the artillery in position. During the whole of the 27th each army was studying the positions of its adversary. Those of Barbosa were excellent, dominating the enemy.

The Battle Field.

A—Government Artillery. B—Scene of Action. C—Anti-Government Forces.

Placilla, a small village with a few houses, a few outlying cottages and as many ranches, lies at the foot of the heights back of Valparaiso, being thus between the two armies. It occupies a low space between the gentle acclivities and broad ridges upon which the revolutionists were posted, and the more rugged hills forming the heights in rear of the port.

The army of Barbosa occupied a line of small extent and considerable depth, being about fifteen hundred yards from the extreme of one flank to the other. The main road from Placilla to Valparaiso, which the enemy would take, passed nearly through the center of the line. The infantry extended on both sides of the road. The left reached to the road of Las Zorras, where it was protected by a deep gulch. The right extended to another deeper gulch separating the ridge running towards Laguna from the hills immediately back of the port of Valparaiso. The flanks were protected, therefore, by two deep fissures which could be passed only with care and without resistance. The artillery was distributed in three parts. One body was near the center but towards the right, on a hill near the main road to Placilla. Another body was near the center also, but towards the left, on a commanding hill, and a little to the rear of the first body. The third body was on a small hill towards the right, overlooking the left wing of the enemy and a portion of the gulch

upon which rested the right of Barbosa's army. The cavalry was in that part of the main road which descends to Valparaiso, where it was under cover from the fire of the enemy, and at the same time very near to the infantry. The reserve was stationed on the ridge near the main road, in that part of it which descends to Valparaiso.

At break of day, and after the dissipation of the light morning fog, Barbosa's staff noticed that the revolutionary army had advanced its line to the slopes and hills nearest the heights occupied by the Government forces. At half-past seven the order was given to Colonel Fuentes to open fire with the artillery. This officer, who was apparently the hero of the day, directed a portion of the artillery to engage the revolutionary artillery, reserving for himself the fire on the advancing infantry. A few moments afterward the artillery and the skirmishers of Canto commenced firing, and the action became general. For an hour and a half the firing was incessant, but the troops on both sides maintained their original positions. Suddenly the second regular regiment, which had been in reserve, when ordered to support the left wing, deployed in fine shape under fire, and then, throwing up the butts of their rifles, deserted to the enemy. Other battalions at once commenced to retire in disorder, followed by a portion of the artillery. The retreat left the guns of Fuentes completely uncovered, and the main road to Placilla entirely open.

When the revolutionists saw this sudden and unexpected retreat they advanced rapidly with their right. A part of their cavalry advanced also by the main road very slowly, and soon reached the rear of the Government line. Finding no resistance, as the troops charged with the defense of this point had retired, they obliqued toward the Government right until they met Generals Barbosa and Alcérreca, who were personally directing the defense of the artillery of Fuentes. A few moments before this Colonel Fuentes had retired on account of a wound in the face. After a short struggle, during which both Generals were killed, further resistance became impossible, and the disorganized remnants of the army dispersed in the direction of Valparaiso. Officers and soldiers both agreed that the battle was lost by the defection of entire corps, which either did not fight or fired only a few volleys. It is calculated that but little more than half of the army actually took part in the fight. This is the only explanation of the fact that none, or few, superior officers were wounded or killed, for the battle was fought in a limited space, completely in the zone of fire. Without doubt, however, there were in all the corps officers and soldiers who remained loyal and faithful to their duties.

At 10:30, after three hours of struggle, the fight was won, and the victors advanced to Valparaiso. The number of killed and wounded was great, nearly 5,000 being afterward treated in the hospitals of Santiago and Valparaiso.

There was a most unaccountable lack of plan on the part of the Government. The terrain in the general vicinity of Valparaiso had not been carefully reconnoitered. The chief-of-staff of General Alcérreca had made a reconnaissance toward Quinteros a few days only before the landing. There was but one practicable road in that direction, and that was not in good condition. The country was very rugged, and the topography in detail was unfamiliar to the officers.

There had been apparently no preparation of roads or paths to enable rapid concentration of troops anywhere off the line of the railroad, or to facilitate the movement of supplies of ammunition or food. This would not have been a difficult matter, as the only practicable landing places for invading troops are quite near Valparaiso.

The line of defense chosen by the President extended along the heights overlooking the railroad from Viña del Mar, having Fort Callao for the protection of the left flank. This is an impregnable position, with all the advantages a general could demand. There is no doubt that both Generals Alcérreca and Barbosa had definite instructions not to bring on a battle

A Chilean Soldier.

until the whole army should be concentrated on this line. Out of range of the guns of the squadron, and with inexhaustible supplies within reach by rail, there could have been little doubt of the result.

General Alcérreca reached the field of Concon with a portion of his division quite early on the 20th, the same day of the landing at Quinteros. Barbosa arrived later in the day, but did not actively assume command. A member of his staff asked him how he liked the disposition of the troops, and he expressed himself as not pleased. There was an evident coolness between the two Generals, and no concert of action whatever. Some members of the staff endeavored to have carried out the President's orders directing a strategic retreat towards Viña del Mar, holding the enemy in check as much as possible, so as to give time for the arrival of the Concepcion division. This effort did not succeed. The President evidently had some intimation that matters were not going altogether well, for he telegraphed to the field to know if Barbosa were there, and, on being informed that he was, immediately sent word to both Generals "to work together."

There was no concert of action, however, no council of war, and matters drifted along until the army was hopelessly engaged by the exceedingly vigorous and enterprising enemy, and then it was too late to withdraw.

Both Generals made the fundamental error of underrating the enemy. Previous to the landing, in a council of war at Santiago, Barbosa had opposed the idea of sending more than three thousand troops from the capital, in case of an invasion near Valparaiso, to aid Alcérreca's division. The latter officer expressed himself frequently in terms of unmeasured contempt in regard to officers, men and arms of the revolutionary army; and before the action of Concon had commenced both Generals were heard to say that the revolutionists were evidently an ill-equipped and undisciplined mob which would be scattered at the first onset.

As afterwards happened at Placilla, the artillery was not properly supported at Concon; and the left wing was so placed that it was readily flanked by troops which approached unseen. The whole line of Government troops was exposed to the fire of the squadron; and although the losses from this cause were small, the demoralizing effect of screaming, bursting shells was undoubtedly great.

The Government troops went into the action of Concon having practically fasted from the day before. This was represented to the Generals, but no steps were taken to feed the men, and they consequently fought under that additional and fatal disadvantage. The whole transport and commissariat service was ridiculously inadequate, and the hospital service on both sides seems to have been equally inefficient.

Santiago; and only when the Minister of War, a civilian, insisted, after much opposition, on a reconnaissance in force, which he conducted himself, was it known definitely where the enemy had gone.

In fact, only after the arrival of the Minister of War does there seem to have been any unanimity of action and any spirit of enterprise or activity displayed. It was then too late, as a

After the Battle.

There were no preparations for signaling. The whole country is so rugged that the passage of large bodies of troops can be readily concealed from ordinary observation, and the use of cavalry for scouting is undoubtedly difficult. An efficient signal corps would have contributed much information after the battle of Concon. As it was, the revolutionists having cut the railroads and telegraph lines, General Barbosa firmly believed, for several days, that they had gone to

profound demoralization was noticeable everywhere; and all impartial observers considered that the result of the next action would leave the revolutionists in full possession of the field.

After the battle of Concon and the advance on Viña del Mar, it was the desire of some of the leaders of the revolutionists to retire to the ships and re-embark. The line of the Government was too strong, and there was no uprising in their favor in Valparaiso. Added to this, their troops

were thinly clad, and their means of keeping up communication with the ships, their base, were inadequate. The advice of the chief-of-staff, Colonel Körner, prevailed, however, and the movement around Valparaiso was determined upon. This was taking a great risk, but the exultation of the troops at the result of the first battle and the large accessions to their ranks of deserters, prisoners and stragglers, and the evident discouragement of their opponents, made the attempt a very attractive one. Without doubt, also, Colonel Körner made a shrewd estimate of the utter incapacity of the opposing Generals.

Owing to Körner's influence also Canto's officers were supplied with maps of the country surrounding Valparaiso; and the plan of their operations was known and understood by all the principal officers. There was no confusion in their organization, and they went about their hazardous undertaking in an energetic, practical, determined manner, guided evidently by one thoroughly acquainted with his profession, as understood and practiced by soldiers of the present day, a striking contrast to the tactics of the Government Generals.

The operations of the squadron were not so brilliant. During the attack on Viña del Mar on the 22d of August several of the ships took part in the artillery fight, but were exposed very little. There was an evident disinclination to take risks, and their assistance was of no value. It seems to have occurred to them too late that the Government might make an effort to bring troops from Coquimbo; for the transport *Imperial* left Valparaiso on the night of the 23d, and embarked two regiments of the Coquimbo division without difficulty. One ship could have prevented that. These troops were landed in Talcahuano. So far as the squadron was concerned they might easily have been brought into Valparaiso, where they would have made a valuable and cheering addition to the disheartened troops waiting in line of battle.

The squadron lent no assistance during the fight at Placilla, even by their presence in force. During that battle not a shot was fired from the ships at the forts, nor was there any demonstration of any kind.

The battle of Placilla was won, Valparaiso occupied, and yet no ships appeared. Finally the torpedo boat *Sargento Aldea* was sent out in search of the missing squadron, and just at dusk the *Cochrane* appeared. The remainder came along during the night and the next day.

It must be supposed that the months of anxious watching following the loss of the *Blanco Encalada* told somewhat upon the enterprise and nerves of the officers of the squadron; for, leaving Coquimbo and Talcahuano unwatched, it is difficult otherwise to conceive why they did not take a more prominent and brilliant part in the capture of Valparaiso.

THE FIFTY-FIRST CONGRESS.

By Ex-Governor Lionel A. Sheldon.

PARTY feeling was aroused to the highest pitch at the very commencement of the session, by the rulings of the Speaker, and was subsequently exacerbated by a revision of the rules of procedure. Great bitterness prevailed from the beginning to the end of that Congress. From this cause the political opponents of the majority were at no time in a frame of mind to treat their work with ordinary fairness. The partisans of the minority readily fell into the same spirit, and consequently from one end of the country to the other assaults of a severe character were made, and denunciation was unsparing and continuous. Its extravagance was assailed unremittingly. The appropriations were unprecedented in amounts, but the assailants have carefully abstained from going into details. Had they done so, it would appear that much, at least, of the increase was for just and worthy objects. The work of the majority has not been defended as its merits deserve. One thing, however, is undenied and undeniable, and it is that upon the main issues in the campaign of 1888 the majority faithfully executed the commands of the people given at the polls. It is not my purpose to consider the work of that Congress in detail or as a whole, but that part only which in my judgment should receive the approval of the entire body of the American people.

Considered apart from party prejudice or personal or local interests, and with reference to the welfare of the country as a whole, the economic and commercial legislation of the Fifty-first Congress appears to be the most comprehensive, best constructed and adjusted of any since the formation of the Government, and particularly well adapted to the conditions which then existed We were buying of foreign nations many commodities which we ought to have produced; our labor was in severe competition with cheap foreign labor; our products were exported as raw materials, and brought back as fabrics largely enhanced in price by the labor which had been bestowed upon them, and by the percentages paid for transportation and handling. We were paying annually an immense sum of money for transportation upon the sea to foreign ship-owners, and for want of a merchant marine were dependent upon rival commercial nations for the development of our export trade. Wages was not only imperiled by competition with cheap foreign labor, but forced idleness was rapidly increasing in the country. Much of our exportation was indirect and through foreign channels, and balances of trade in our favor were less than they should have been, and there was danger of their becoming adverse. Practically we were paying more money to foreign nations in commercial transactions than we received from them if the sum paid for transportation were taken into the account.

The legislation of that Congress was intended to remove the disadvantages from which we were suffering, and though there may be errors and defects in details, the general theory is correct and adapted to the ends sought to be accomplished. In the tariff law the governing principle is to admit free such necessaries of life as we cannot practically produce; to impose duties on such commodities as we should produce,—just high enough to make up the difference in the cost of production; which difference was mainly, if not altogether, one of wages paid laborers. Exceptions to this general rule were the imposition of higher duties upon luxuries, and upon certain other articles which we did not manufacture,

for the purpose, merely, of aiding those who were disposed to take the risk and expense of starting new industries, it having been demonstrated in past experiences that this policy has the effect to enlarge manufacturing and in a brief time to lessen prices. It has also increased the demand at home for domestic raw materials and food articles. It protects the sugar producers by granting a bounty equivalent to the duty which was removed. The agricultural interests are especially subserved by the imposition of increased duties, and by the enactment of a law providing for the inspection of exported meats, which removes the whimsical reason urged by some of the European governments for prohibiting their importation into their countries.

Congress also recognized the fact that demand for our food productions was larger and more reliable in the countries south on this continent and in the adjacent islands, and that in Europe it was fluctuating and depended upon production there. It is well known that European nations exert themselves to produce sufficiently to feed their own people, and as a rule they succeed, except Great Britain, and they do not buy of us very much outside of a few articles. On the whole, Continental Europe imports, comparatively, limited quantities of breadstuffs and provisions. Great Britain realizes that she is unable to produce enough at home to supply her own people, but she has dependencies which are our competitors and to which she gives the preference. She endeavors to obtain from them all she can, and though she is our best European customer she buys from us much that is transshipped to countries with which our trade should be direct. Apparently, Great Britain had theretofore furnished Brazil with more agricultural products than we, notwithstanding our imports from Brazil had been large. A considerable part furnished by Great Britain came from this country. Though Cuba is but a short sail from the United States, she bought comparatively little of us. The duties imposed by Spain were so high that they enabled Andalusia and other agricultural provinces of that country to supply the Cuban demand. In one way or another we were cut off from or embarrassed in our trade with the very countries most convenient to us, and with which we ought to have had the largest export trade. Our wages being higher than European, and our industries more limited, we were unable to successfully compete in the southern countries, as well as being obliged in some lines to purchase from our commercial and manufacturing rivals. To avoid the latter, encouragement is given to new industries; and to assure what naturally belongs to us, reciprocity was adopted as the finishing feature of the tariff law. The theory of reciprocity is, that as we admit free of duty certain commodities, largely produced in the southern countries, it is but just that we should receive an equivalent, and that nations thus benefited by this legislation should concede to us advantages not granted to others who do not or cannot offer the same benefits that we have conferred. Our sugar alone has cost us $70,000,000 annually, and it is of the highest importance that we should pay for it by an exchange of commodities. The same applies to coffee, tea and hides. Our sugar and coffee come largely from Cuba and Brazil. If we were able to pay for these two items by an exchange of productions it would make a difference of $75,000,000 or $80,000,000 on the credit side of our international trade, and would cause a very handsome increase of balance in our favor. If our manufactures are in larger varieties we will be able to supply more to the nations with which we have reciprocity treaties, as well as to our own people. The tariff law, therefore, must have the effect to enlarge our exports and diminish our imports, and not only to keep our gold at home but to draw it from other countries.

The legislation of the Fifty-first Congress would lack in comprehensiveness if it stopped here. We would still be obliged to pay out our money to foreign nations for transportation; and our export trade would not be developed to the fullest extent without possessing a sufficient merchant marine. We would still be dependent and could not expect that foreign ship-owners would exert themselves for us as they would for their respective nations. It is hardly human nature to be thus impartial. Congress, therefore, passed acts to encourage building and sailing of ships. All that is necessary to enable us to compete with nations that already have the control of carrying upon the sea may not have been done; but a beginning has been made, and if followed up in future in the same spirit with which it has been commenced, sooner than expected we may be able to resume our former status as a maritime power. Our own people have business enough to employ a large marine force, and it is presumable that our countrymen will be preferred, other things being equal. It will be some time before we possess so many ships that any of them will have to lie idle. To have a large merchant marine will not only tend to increase our export trade,—and as we are the greatest producing nation in the world it is the most important part of our international commerce,—but it will give profitable employment to our idle population. It supplements the establishment of new industries, and aids in removing involuntary idleness from the country. With reciprocity and a merchant marine our international commerce will be essentially continentalized; for not only our agricultural products, but our manufactures, will find their chief demand from countries this side of the Atlantic. European nations manufacture for themselves, and depend more largely on the American nations for markets than upon other parts of the world. The countries south of us do not manufacture to any considerable extent, and natural conditions will prevent their being formidable rivals in that respect. The United States alone is able to compete in manufacturing industries and in commerce with the nations of Europe; and as a producer of raw materials and of breadstuffs and provisions we now occupy the first position. The struggle, therefore, is for the trade of the States in Central and South America and the adjacent islands. The policy of reciprocity grasps this question, and is not only an entering wedge to that trade, but if continued the result cannot be otherwise than immensely in our favor.

It is essential to consider the further fact, that in those southern countries, and not in Europe, the balance of trade has been adverse to this country, though it appears otherwise, because international trade accounts are settled in London, which is the clearing-house of the world. We read of frequent shipments of gold to Europe, but never to the Central and South American States; and under this state of affairs the British people manage to secure to themselves the final balances due from whatsoever nation, which gives that country its monetary predominance. London for long years has been and is the monetary center of the world. To continentalize our trade will tend strongly to break up this monopoly, and transfer to this country, in considerable part at least, the money center. Our territory and commerce are so immense and our geographical location so peculiar that a single center would be inconvenient and improbable. Natural conditions indicate that the clearing-houses for our foreign commerce would be in New York on the Atlantic, New Orleans on the Gulf, and San Francisco on the Pacific Coast. The monopoly of London in handling the money of the world not only enriches Great Britain, but enables her to dictate the kind of money the world shall use in international transactions. Monometalism

had its inception in that country, which is the persistent foe of bimetalism. So long as Great Britain maintains her trade and transportation ascendency she will dictate to her advantage the money and monetary policy of all nations. It will be easy for the American States to agree upon a common monetary system; and the proposition to establish international coinage is a step in that direction. The bulk of gold and silver are produced on this continent; and to deprive Great Britain of the handling of the world's gold will quicker and more surely than anything else force the adoption of both the gold and silver standards of value. The southern countries settle their balances in gold as money or in silver as a commodity. If they were settled here, and they will be if trade with those countries is properly developed, we can dictate the kind of money that shall circulate in international transactions. Free silver coinage would be the inevitable and speedy result, and the narrow and deficient single measure of value would no longer be a Shylock to production and commerce.

The economic and commercial legislation of the Fifty-first Congress has enemies at home and abroad. The former confine themselves to criticisms of a few details, and the latter attack the principle upon which the structure rests. The domestic foes desire to accomplish a political object, but the foreign are hostile because it is a serious blow to their interests. The enemies at home have not the courage to join their allies in the mode of attack, because the policy is Americanism against foreignism. The reverse at the first election was brought about by continued prediction of disasters, and by carping about a few details. There had been no demonstration as to the effect of the legislation, because there had been no time to produce results. The country now has some realization of the benefits that will flow from it. New industries are springing up all over the country, and old ones are reviving. Domestic demand for agricultural products has appreciably increased, and employment is given to the involuntarily idle. Our exports are increasing and our imports diminishing, and gold is flowing inward instead of outward. The short crops in some of the European countries has had a favorable influence upon our general export trade, but they have no effect upon that of the countries to the southward. The fact that we are importing less from and selling more to Europe demonstrates that we will have the markets there for food supplies whenever conditions are exceptional, as in case of short crops or war. Reciprocity treaties have been entered into as yet with but few nations. Brazil was the readiest to engage with us, but Spain was reluctant and would not have made concessions if she had not felt obliged to. The United States is supposed to contain about one-twenty-fifth of the population of the globe, and yet one-seventh of the entire sugar production of the world is consumed here. It would not do to deprive Cuba of the immense market of this country. Germany raises sugar for export, and hence she felt obliged to grant as liberal terms upon commodities imported from this country as the stipulations of the Dreibund would permit. It will require but a year or two to disclose the profound wisdom of the measures that Congress devised for the promotion of our industrial and commercial interests.

This policy is in line with that which prevailed from the beginning of the Government to the advent of Polk to the presidency. The departure then taken continued to 1862, and would have been restored under Cleveland if Congress had been in accord with his views. Conditions two years ago were such as to require a broadening of legislation so as to cover reciprocity and to aid the shipping interests. The legislation of the Fifty-first Congress also more clearly defined the principle upon which it

is framed than any that preceded it. The labor question in earlier times was not so important, as the settlement and development of a new country opened an avenue for the employment of all; and involuntary idleness was a thing almost unknown until within the last twenty-five years.

The opponents of the economic policy of the late Congress cannot or do not seem to understand why we cannot manufacture without protective duties. There are two reasons, chief of which is that labor costs about double in this country what it does in rival manufacturing nations, and it constitutes fully seventy-five per cent on the average of the cost of production, presenting to this country the alternative of reducing wages or protecting labor by adequate imposts. The other is that in the old countries plants comprehend all classes of manufacturing, and are well established and sustained by acquired patronage. In some lines we have no plants, and the business must be started *de novo*, which imposes hazards that foreigners do not have to take. It is proper that some inducement should be offered to assure against these hazards. Where plants are established the duty need be only high enough to make up the difference in the cost of labor. Unless the principle stated is applied it is impossible for our people to have the benefit of our own markets. Foreigners can undersell and still make an immense profit.

It is true that our merchant marine before the late war had grown to immense proportions without aid from the Government. That was in the days of wooden ships. The war of the Rebellion destroyed our foreign carrying trade, and left us with nothing but coastwise trade, in which foreign ships are forbidden by law to engage. The shipping which passed out of our hands amounted to 1,800,000 tons, nearly one-half having been sold and placed under foreign flags to avoid the depredations of Confederate cruisers, and the balance was bought or chartered by the Government and worn out or lost in the public service, and destroyed by the public enemies upon the sea. When the war closed it is estimated that it would have cost $100,000,000 to replace our lost tonnage. Interest rates in this country for a considerable time thereafter on the average were nearly double those prevailing in foreign countries, and other nations had the possession of the sea. In the face of these disadvantages our people could not afford to enter into competition so unequal. The obstacle of high rates of interest in a measure is removed; but all others remain, and one that has not been mentioned is that every important commercial nation grants liberal subsidies to their great steamship lines. Formerly transportation was performed on the competitive principle, by single ships, but latterly it is carried most largely through regularly organized and operated lines. The proposition to admit foreign-built ships to an American register so that our people can buy them would be some aid; but there still remains the contest to gain patronage from those who already possess it, the difference in wages paid seamen, and the liberal subsidies paid by foreign governments. Those who oppose these measures, unless they prefer foreign monopoly in manufacturing and international transportation, should suggest those that are more efficacious in building up American interests or hold their peace. To see our labor well compensated and dignified, our industries thrive, our money retained at home, our country dominant as a monetary and political power, and our ships doing, at least, our own carrying trade, should be the desire of every American.

A STAIN ON THE FLAG.

By M. G. C. Edholm.

IT was generally supposed that slavery was abolished in the United States during the administration of Abraham Lincoln; yet, if the facts were known, as they will be to the reader of the present paper, there exists in this country, wherever the Chinese have obtained a foothold, a slavery so vile and debasing that all the horrors of negro American slavery do not begin to compare with it. In San Francisco, Los Angeles, New York and other cities where a local Chinatown prevails, women and children are sold to the highest bidder every month in the year,—not merely sold, but imported for the purpose, agents being kept in China for this object; and until the Restriction Act went into operation they were doing a thriving, land-office business. The negro of ante-bellum days was a prince in fortune to the luckless Chinese slave: the former was sold to work, while the latter is selected, bought and handed over for a use compared to which death would be a happy release. For years this system of human slavery has been going on. Good men and women, representing the various churches, have fought it unaided, but it rests to-day a stain upon the American flag, —a blot upon the national honor; and the object of this paper is to present certain aspects of the crime to the lawmakers of the country, and to ask how long such things can be in a country that avowedly offers a refuge to the oppressed of all nations. In the work of stopping the sale of women and young girls in San Francisco, the hot-bed of Chinese slavery, especial credit is due the Presbyterians and Methodists, who have established homes for the rescue and education of these girls and women. The annals of these institutions rival Shakespeare for tragedy; and for dark, damning deeds they read more like the records of barbaric ages and heathen countries than those occurring under the full light of Christian civilization.

These homes are sustained by the Board of Missions of these two churches, much of the money being raised by the Women's Missionary societies,—well disproving the old adage that "woman is woman's worst enemy;" for these tender-hearted women labor night and day for the amelioration of their sisters. The records of these two homes show that hundreds of little girls and women have been rescued from this slavery worse than death; and Miss Margaret Culbertson and Miss Houseworth of the Presbyterian Mission, and Rev. F. J. and Mrs. Masters, Mrs. Downs and Mrs. Ida Hull of the Methodist Mission, and Rev. M. C. Harris of the Japanese Mission, could a tale unfold that would amaze and horrify the world.

In following the career of these girls after rescue, education and Christianization, the sunny side of Chinese life is shown; and many a pleasing romance of love and courtship, happy marriage and a loving home, echoing with the laughter of little children, represents the payment these workers have received.

First, in regard to child slavery: Fathers, and mothers sometimes, sell or pawn their girl babies; and as they are seldom redeemed they become the absolute slaves of their masters. The Chinese mother has little to say as to the disposal of her children, who belong to her master; and if he sees fit to sell them to others she has no choice. One such Chinese woman, with her little girl six years of age, with a frightened, hunted look, begged the protection of the "Jesus women," as they call the Methodist Mission,

saying that the man who had bought her six years before, and with whom she had lived, had become tired of the delicate, puny child, and had determined to sell it, as it hindered her from sewing and earning money. She clung to her child with all the tenacity of a mother's love, and resolved that it should be saved to her at all hazards. Then he trumped up a charge that she had won three hundred dollars by gambling, and demanded that she give it to him or he would sell the child.

The poor woman was driven to desperation and knew not what to do. At this juncture she heard of the Mission house, and fled with trembling steps to its shelter.

Her master, Ah Ong, had powerful friends, and resolved that he would not give her up without a struggle. So day by day she was annoyed and alarmed by the frequent calls made by his friends to speak with her trying by every means to persuade her to return. To all their entreaties she gave a firm refusal.

At length the Chinese Consul-General with his attendants, dressed in his long silk robes, called for her. She begged to be excused, but trembling in every limb came and stood in his august presence. He, with an air of authority, demanded that she return for the honor of the Chinese people, until he was told that he could only ask her, and that no threatening or enforcing of Chinese customs would be allowed. He then promised her protection and a life of ease for herself and child.

She with streaming eyes and great humility, but with determination, told him she knew Ah Ong better than any one else did, and that she was convinced that her loved one would be spirited away or else suddenly die, and if the authorities in the Mission would allow her to remain she would never return to Ah Ong. Of course permission was granted. Grace Methodist Sunday School assumed the support of little Ah Kum, the child; and thus her mother and herself were saved from a life of slavery and worse. A little over a year ago Ah Kum was married to a Christian Chinaman.

Young Chinese girls are often forcibly kidnaped in China, illegally landed in America, and sold to the keepers of places of ill-repute; and, of the inhuman treatment they receive, Miss Culbertson of the Presbyterian Mission testifies that these cases subjoined could be muliplied a hundred fold. One little slave-girl who was being reared for a revolting life was obliged to sew from seven o'clock in the morning till one o'clock at night; and because she would fall asleep through exhaustion her ears had been cut, her hands burned, and she had been beaten and tortured frightfully. Another, who had been rescued from a life of shame, had her eyes propped open with pieces of incense wood because they would at times close wearily in sleep after sitting up through long hours. Her eyes were badly lacerated and inflamed by the treatment.

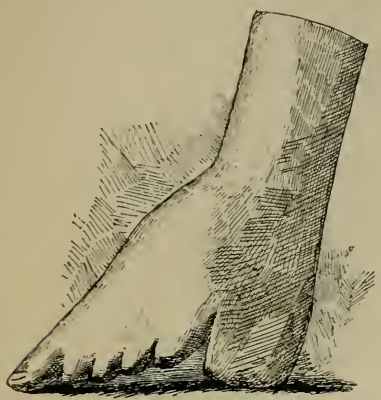
The terrible condition of another little one, only eight years old, makes one's fingers burn to throttle the heartless keepers. She was brought to the Home by a white person who knew she was cruelly treated. Her body was in a fearful condition, black, blue and green in color. Her head had several cuts upon it. Her eyes and lips were much swollen, and her hands resembled pin cushions, so badly swollen were they. The Superintendent sent at once for Mr. Hunter of the Society for the Protection of Children, who said in all the years of labor for the rescue of suffering children he had never seen anything to equal this child's condition, and the woman should be arrested for cruelty. With Officer Holbrook, Miss Culbertson went and had the keeper arrested and sent to prison; but, as usual, she was bailed out by one of her countrymen for one hundred dollars.

Miss Culbertson now went to court to take out letters of guardianship,

Ah Kum, a Rescued Slave in War Dress.

and then showed the child's body to the Judge; yet when her keeper was tried and plead guilty she was fined the paltry sum of thirty dollars.

The little girl was the slave-child of a firm on Dupont Street. The wife, a bound-footed woman, was a perfect



Fac-simile of a Chinese Woman's Foot.

fiend in temper. One method of punishment was to beat the little thing until she was faint, and then to catch her by the hair and drag her on the floor.

Another child had great scars and seams up and down her back and upon her limbs where she had been burned by red-hot irons and scalded with boiling water. Sometimes the tortures are so terrible and long continued that reason becomes dethroned. Sometimes their bodies are so diseased by these cruelties and privations that the best medical care in the Home and the most tender nursing cannot prevent death; but still these slave-dealers continue their horrible traffic with no punishment worthy the name.

But still worse horrors are in store for the little slave-girl as she nears womanhood; for then she is forced to a life of shame,—*the object of all Chinese slavery;* and, if she resists, all the tortures of the Inquisition are resorted to by her cruel masters till she gives herself up body and soul. No need for the Chinese slave to read Dante's "Inferno," or to see the awful horrors of Doré's brush; for her own existence is a living realization of both.

Could there be anything more pathetic than the stories of these few girls, which is the fate suffered by thousands? One girl says: "I was brought here eighteen months ago, and am twenty years old. I was kidnaped in China and brought over here. The man who kidnaped me sold me for four hundred dollars to a San Francisco slave-dealer; and he sold me here for seventeen hundred dollars. I have been a brothel slave ever since. I saw the money paid down, and am telling the truth. I was deceived by the promise I was going to marry a rich and good husband, or I should never have come here."

Another said: "I am seventeen years old. I was born in Canton. When I was ten years old my parents sold me to be a domestic slave. A man brought me here, and he returned to China, having sold me for five hundred dollars. I came to this country three years ago. My master wanted to take me to be his slave, but I resisted. I did not want to be his slave. He had one wife already." *The Rev. F. J. Masters adds in a foot-note, "The girl's master, in presence of Mr. Young of the Episcopal Mission, confessed that his wife bought the girl of a woman for $300."

Another girl says: "I was sold for $2,970; was a slave in a place of ill-repute; never a wife. I escaped by running to a more friendly Chinaman, who kept me till night, and then, disguised in his American clothes, I was taken to a hotel on Bush Street. My master traced me and sent a spy, who got me into a carriage; but when they tried to take me into a cellar on Pacific Street I screamed so that the police took me from them." When this slave was finally found by the Mission people she was in a cellar under the pavement, watched over by

* See the article on Highbinders, by Rev. F. J. Masters, in the January CALIFORNIAN.

a Chinese master, who was keeping her under the influence of drugs.

In all these sales there is a contract made and given, as there would be in the sale of a horse or cow. As might be supposed, it is extremely difficult to obtain an original copy of one of these documents, but one has been obtained; and a fac-simile of what is probably the only contract in the hands of "American devils," as the Chinese highbinder delights to call us, is shown in the accompanying cut. The black spot upon the left side is the seal of the slave-girl, made by pressing her inked finger upon the paper. The contract is given in the original Chinese; the translation would be *a blot upon these pages.**

Here is a story a little more in detail, told by a refined Chinese girl, which also shows how they are taught by their masters to perjure themselves so that they may land in defiance of all law. "I am sixteen years old; was born in Canton. My father died when I was two years old, and left my mother and me and a little brother with no one to support us. My mother worked hard as a seamstress, and I helped her when I got older. When I was fifteen years of age arrangements were made for my marriage, and I was betrothed to a man in Hong Kong. I did not see him, as according to Chinese custom we do not see each other. This was on the tenth day of the tenth Chinese month of last year. On the first day of the eleventh month he came up to Canton again with a woman. He sent the woman to see me and to tell me to get ready to go down to Hong Kong with him. I told him that I must wait till my mother came home before deciding. She urged me to go at once, as my husband was waiting. I went reluctantly, but I thought she spoke true. We went down on the steamship *Hankow*. She took me to a house, where we had a room together; but I saw nothing of the man who was to be my husband. After six days the woman left me in charge of a man, who said I had not got to my husband yet, and that I should have to go on a steamer a few days' journey before I saw him. I did not know who the man was. They said I was going to California. We went on board the steamship *Belgic*. When we got to Japan I found we did not get off the steamer, but went on; then I cried to go back to my mother. I cried all the way over.

"There was a man on board who all the time was teaching me what to say. He coaxed me to be quiet, and told me I would have a rich husband and a fine time in California.

"He said I was to say I had been to California before, and had left a year ago. He said I was to tell them my husband was a ladies' boot-maker living on Jackson Street near Dupont, and told me if I made any mistake in my words, and made any fuss, there would be a foreign devil come and take me away to the devil prison, and I should never see my husband.

"On the third day of the twelfth month I arrived in San Francisco; but it was not before the sixth of that month that I came ashore. On that day a white man came to where I was and called out my name and gave me a white paper, and I went on shore and they measured me. Then I got into a hack with one white man and one Chinaman, and they took me to a house near the court. I was there for several days. I answered all the questions satisfactorily. I swore that my husband lived here, and that I had come to join him. I went again in two or three days till it was all over, and they let me go.

"I went back to a family house; and the next day a slaveholder came to see me, and asked me if I would like to go with her and be willing to go to a house of ill-repute. I indignantly

* A careful translation of this slave contract has been made by the Rev. F. J. Masters, of the Methodist Chinese Mission of San Francisco; and copies will be provided to clergymen, U. S. Senators, Members of Congress, and those engaged in actual philanthropic work, by addressing THE CALIFORNIAN.

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合同

光緒十弐年八月十一日　立帮数人新金 ● 指摸

Fac-simile of Original Slave Contract in Possession of "The Californian."

refused, and said I was going to be married in a few days. Then I got suspicious and began to cry; but they told me not to fear, that I was going to a nice place, and would have plenty of food and fine clothes and jewelry, and go to the theater and have a nice time. I cried very much, but it was of no use. The man who brought me over said I must go, and so the money was paid and I was bought. One thousand five hundred and thirty dollars were paid for me. I saw the money paid, and I was taken on the twenty-sixth of last month of last year and placed in her den. They forced me to do their bidding, but I cried and resisted. I did not want to lead this life. They starved me for days, tying me where food was almost in reach of me, which looked so good. Then they beat me time after time, and threatened to kill me if I did not behave right. I heard of the Mission, and I waited my opportunity to run, and so I escaped."

Artists have pictured the slave marts of Turkey, where women are being exhibited before the rich possessors of harems, and might find a similar, though more horrible and realistic field, in San Francisco. Among the discoveries made by the missionaries was the fact that there existed a regular slave mart. This is on Dupont Street, and is or was known as the Queen's Room. Here the slaves are brought from the ships as they arrive and are exposed for examination to the various buyers, who rate them according to their various standards of physical beauty. In a number of instances where these sales are consummated the victims are treated in a manner too horrible for publication, but which is supposed to render them more valuable for the purpose for which they have been purchased. A number of such maltreated women were exhibited to a member of the New York Society for the Suppression of Crime within a few weeks in San Francisco Chinatown. This gentleman was visiting the locality with certain officials, *incognito;* and the women were exhibited and the healed wounds pointed out as a curiosity, suggestive of the cunning of the Chinese slavedealer in resorting to a device only employed in the case of the lower animals, to add to their market value. This chamber of horrors is in all probability still open to the possessor of two bits and a "guide" familiar with the worst side of Chinatown.

If any one think these slavedealers give up their prey without a desperate struggle they are mistaken, as these two incidents show. Ah Yung, a woman twenty-two years old, was found by Rev. N. R. Johnston wandering about in Beulah Park, Oakland, and moaning as if in great trouble. She was brought to the Mission, and said: "I was born at Sun Ning; have been in this country two years. Yue Ka Sheng bought me in Hong Kong for $185 for immoral purposes. I had no certificate. I was brought ashore on a writ of *habeas corpus.* The wife of Yue Ka Sheng took me away from here a long distance, where I was sold for six hundred dollars. They beat me and threatened to kill me when I was unwilling to go with them. While I was in the place I was married to Woo Yuen Chee, who paid back the money to my master. My husband went back to China the fifteenth day of the sixth month of this year. After he was gone his brothers wanted to sell me. They beat me and employed highbinders to take me, and gave them six hundred dollars to kill me. I was shot at over Wong Ting Hing's shop on Commercial Street, but not hurt. They then employed a man to shoot me, but he took pity and sent me to Oakland, and with the money paid him went back to China. I have had two children; the first died and the second was sold by my husband's brothers when it was fifteen months old. I left the child in a room, and when I came back it was gone."

Rev. F. J. Masters relates this story of a little widow: On the 24th of

February, 1890, word was sent to the Methodist Mission that a young Chinese widow, called Chun Kook, was about to be sold into a slavery worse than death. Her husband, to whom she had been married but a few months, died very suddenly, and immediately after his funeral the widow, who is a very pretty little woman, was taken possession of by her husband's clan. Two big Chinamen, said to be highbinders, were guarding her. The ladies of the Mission and the superintendent undertook to rescue her. We were met by the strongest opposition on the part of the men. They grappled with us, and a hand-to-hand wrestle took place, in which the Chinese became convinced of the superiority of Anglo-Saxon muscle. The woman was rescued and safely housed in the Mission with the household effects which belonged to her. Two more amazed and disgusted looking men could not be found than these Chinamen appeared when balked of their prey."

The famous writ of *habeas corpus* causes endless trouble to these liberators of Chinese slaves; and often justice is defeated and these child-women are in the name of American law handed over to be slaves in the various dens of Chinatown. The well-known case of little Woon T'Sin, in whose behalf Miss Culbertson had to go to court more than a score of times, and for whose return to the dens the slave-owners made such a determined fight, is but one of many. The case attracted the attention of the press not only of California but of the United States. Many examples are on record where the highbinders have assaulted with personal violence the grand men and women connected with the Methodist and Presbyterian Missions, and tried by forcible means to regain possession of their prey. One of the most noted of these cases was that of Rev. Thomas Filben, then pastor of a Methodist church in Sacramento, now officiating as the minister of Bush Street Methodist Church, San Francisco.

Mr. Filben rescued the girl from a den in Sacramento, and started to bring her to San Francisco to the Methodist Mission. The owner of the woman was Chin Ah Fee, the highbinder and dealer in human chattels. It appears that, after Mr. Filben left with the woman on the local train for the Bay, the highbinders, who were defeated in their attempts to regain possession of the slave, assisted by some white men belonging to the ring, whom it would be interesting to know, telegraphed Constable Kincaid at Davisville to arrest the woman by all means and hold her. When the train reached Davisville a lot of savage-looking highbinders, in the center of which was the constable, made an attempt to take the woman; but the plucky minister held his ground and the woman was saved.

Constable Kincaid, when he saw that his scheme would not work, telegraphed the constable at Elmira to board the train and arrest the woman. When the train reached Elmira, Mr. Filben was confronted by the constable, who demanded the woman.

"You cannot have her. Show me your warrant," said the brave clergyman.

The constable insisted that he should have the woman. He exhibited the telegram from Constable Kincaid that he should arrest her.

Mr. Filben would not yield, and gave the constable to understand that if he laid his hand on the woman there would be trouble.

At this juncture a number of the passengers were attracted by the conversation, and sided with Mr. Filben.

The constable saw he was getting into hot water, and left the train.

Mr. Filben, observing the unlawful and desperate attempts the highbinders were making to recover the slave, guarded her so much the more closely. He knew that in San Francisco the agents of the ring, assisted by white men, would be ordered by telegram to lie in wait for the woman as she stepped out of the ferry-house, and then if

necessary blood would be shed to regain the lost slave. Knowing this, Mr. Filben balked them by engaging a coupé, which was driven inside the ferry-gates. Outside was a gang of highbinders waiting to pounce upon the woman. As soon as the steamer landed, Mr. Filben and his charge entered the coupé and were driven out of another gate into the city, where they proceeded to the Methodist Chinese Mission.

In the struggle that ensued the woman's clothes were torn in many places; and she even lost her shoes in the effort to regain her freedom. The slaveowners hate Mr. Filben, and are seeking revenge. They consider him a "white devil," and desire to see him punished for freeing slaves.

Once of twice, too, the highbinders have attempted to regain the slaves by an attack for a certain one in the ranks of Chinese girls who, under the care of Miss Margaret Culbertson of the Presbyterian Mission, every Sunday wend their way to the Presbyterian Chinese Church. But a quick call with a police whistle has brought speedy assistance from the police, whose star means that the whole government of the United States will protect the smallest and most helpless child, black or white or yellow, from injustice.

Several times the life of Miss Culbertson has been in danger, and threatening and warning letters from foes and friends have been received, showing that her appearance on the street meant death. But the brave woman, with a serene faith that she is in the hands of a guiding power and cannot be taken till her work is done and He wills it, calmly goes on with the work. Threats have often been made of assaults on the Mission, but when the Mongolians realize that these girls are devotedly attached to Miss Culbertson, and would fight tooth and nail for her, their plan of assault melts into thin air, and the Mission still stands.

One of the disagreeable features of these cases is that skillful American lawyers are often employed by the Chinese, causing delays innumerable, and, if common report be true, joining their societies for the benefits to be derived. An instance may be cited to illustrate how the law seems to stand in the way of justice. The girl was a mere child, named Woon T'Sun, in whose interests Miss Culbertson had to go to court more than twenty times, illustrating the unrelenting disposition of the dealers.

About five years ago the wife and four of the children of a Chinaman died, leaving him a daughter about six years of age. The man had borrowed money from Kum Mah, a Chinese woman, who had long been a procuress and proprietor of various dens in Bartlett Alley and other parts of Chinatown. He could not pay his debt, and wanted to go back to China; and so, to settle accounts and get a little needed money, he sold his little girl, body and soul, to Kum Mah, and sailed for the Flowery Kingdom.

Miss Emma Cable was then the house-to-house missionary in Chinatown of the Occidental Board. Like Miss Ida Hull of the Methodist Mission, she went regularly to houses and dens of vice, where she would be admitted; for these secluded Mongolian women dearly love these gentle white sisters,—teaching, bettering, helping and raising Chinese women and children wherever their kind ministrations will be received. At Kum Mah's place, in Bartlett Alley, she found little Woon T'Sun, and for some time taught her with others. Later the little girl suddenly disappeared, and every effort to trace her was fruitless.

Late last fall Miss Culbertson found she was with Kum Mah, her owner, on Dupont Street, and went on errands every day to one of Kum Mah's dens upstairs in the "City of Peking," a new brick building on Waverly Place, where Kum Mah had moved when Bartlett Alley was closed and the dens "suppressed." Detective Cox was notified, and on November 16, 1890, he arrested the girl as she was coming

"The Christian Stairway" Rescued Slaves of the Presbyterian Mission.

out of this place, and took her to the Presbyterian Home. The girl was a minor inhabiting houses of ill-repute, and was being raised to become a regular inmate as soon as her age would permit. Miss Culbertson was soon appointed her guardian, and the bright, little girl at once entered the pure life and training of the Home.

As is always the case, a struggle for the recovery of the valuable piece of property began. Kum Mah, aided and advised by "Little Pete" and some of the most villainous highbinders in Chinatown, secured the professional services of an American attorney, and made application to have May Sing substituted for Miss Culbertson as the girl's guardian. May Sing is a young Chinese woman who was raised by Kum Mah for a life of vice, and who now conducts a house of ill-repute for her.

All little girls bought for illegal purposes in Chinatown are made to work and act as servants until old enough to be inmates of the dens; and this was Woon T'Sun's course of life. As she is now worth fully one thousand dollars in the market, and would be worth double that sum in five years, it is not surprising that a desperate fight is made to recover her by the woman who bought her, by murderous highbinders and others interested.

The case was kept on the docket for many weeks, and attracted the attention of the entire press of the State. The ladies of the Occidental Board appeared in large numbers in court, and one of their members said: "It has been the custom of lawyers who take up these cases to make the affair so unpleasant that no lady would care to appear in court. This plan will not work now; we are determined to see this matter through and find out whether these little girls can be protected by the courts of California. To drive the ladies out of the court-room, an American lawyer asked Miss Culbertson indecent and insulting questions,—insinuating that they were not fit to have the care of a child, and that they sold children back to slavery for money, and took bribes for letting them go, and other absurd charges. In Victoria there is a Home like ours, and public sentiment against this slavery is so strong that no lawyer, no matter what his standing, will undertake to recover a girl."

As to the fact of Chinese slavery which the testimony in the case of Woon T'Sun and hundreds of other girls proved, this little paragraph from the decision of Judge Reardon in a similar case, where an old hag claimed to be the mother of a rescued girl, adds significant testimony: "In these Chinese cases of maternity claimed, there always lurks a suspicion that the claim is made because, according to Mongolian methods, the child is valuable property. Yet a few years and this infant will, as prices in the slave market rule, be worth from fifteen hundred to two thousand dollars; and it might well be that the grief, real or simulated, of the mother has a money basis. '*Hinc illæ lacrymæ.*'"

All lovers of justice will be glad to know that, in spite of all the machinations of the highbinders and their American allies in the guise of lawyers, little Woon T'Sun was given to Miss Culbertson's care, and is to-day one of the happiest girls in the Presbyterian Mission.

To the honor of the San Francisco press be it said, their defense of these helpless girls and their motherly rescuers was most manly. Their *exposé* of slavery was fearless. The *Examiner* said editorially: "It is time for people with the instincts of humanity to pay some attention to the proceedings in the courts with reference to the wretched Chinese women bought and sold by their masters, who speculate in their degradation. The Mission Home, presided over by Miss M. Culbertson, has done a noble and arduous work in rescuing these poor women from the hells in which they have been imprisoned. This work has been carried on literally at the point of the revolver

against the unremitting opposition of the murderous highbinders, who have been outlawed in their own country and make assassination and every species of crime their profession in this. The odds are fearful, but one would think in such a contest as this the Mission could at least rely on the support of the laws of its own country.

"The first resort of the highbinders, when a victim escapes to the protection of the Mission, is to the American courts. They can always find lawyers who, for a fee, are willing to aid them.

"The highbinder is not content with making a straightforward fight. He attempts to drive from the witness stand the modest Christian women, whose lives are devoted to the work of helping these unfortunate Chinese girls, his plan being to ask them wholly unnecessary, irrelevant and indelicate questions in the coarse language of the slums. He takes a positive delight in his unclean work, and announces his intention of keeping up his infamous war on the Mission until his work is accomplished.

"*The thing must stop.* The laws of California are adequate to protect a band of good women unselfishly working in the cause of humanity and decency; and the public only needs to know what is going on to make its voice heard in a way that will be respected."

All this was foreseen years and years ago by the Chinese merchants, and at the first legislature in the State they sent a petition to the lawmakers to keep out Chinese women of immoral character. At that time there were only a few such in the country, but they were beginning to send to China for ship-loads of slaves for brothels. Then these "heathen" merchants appealed to their "civilized" American brothers begging them to stop the traffic in its incipiency. But the bill was tabled, and the result is, as might have been expected, the traffic has grown to immense proportions. That the traffic exists is well known. Evidences of the horrible treatment of the victims have been published for years; yet no case has ever been brought into court, no buyer or seller sought to be punished; and the traffic and the slavery go on as steadily, obviously and certainly, as in New Orleans before the war.

Who cares? What are we going to do about it? These noble Methodists and Presbyterians will rescue a few in their Missions. Like Mr. Charles N. Crittenton, the noble philanthropist of New York, who has spent thousands upon thousands of dollars in founding Florence Missions in New York, Newark, Sacramento and San Jose, for the rescue of erring white sisters, these grand Christian people are doing the same for the dark-eyed, dark-skinned sisters of Asiatic birth. But with all their rescue work thousands of these poor girls cannot be reached. Active co-operation and hearty assistance should be given by all who have one drop of Christian blood within their veins. These girls revolt at their horrible lives. But what choice have slaves? Let America blot out yellow slavery as it has blotted out black slavery. Let the Chinese woman as well as the African man point to the stars and stripes and say, No man dares do me injustice under this flag.

MEN OF THE DAY.

By Thomas Clavering Travers.

A DISTINGUISHED European scientist who visited California recently said to a resident of San Francisco, "I admire your fine city and the remarkable industrial development going on throughout the State; but what has interested me most is a study of the descendants of the men you call pioneers. According to theory they should be an exceptional race of men; and my observations lead me to believe that this is so to a marked degree."

The true advancement of a State or country depends, to a great extent, upon the people,—the men and women who constitute the workers in all the fields of labor and professional life. New England was settled by hardy Englishmen,—the pick of the race,—men who would not be kept down, and who declared that, if they could not have what they believed were their rights, civil and religious, in the land of their birth, they would search for shores where they could enjoy them. They were, in the main, men of high feeling and strong intellectual powers; and to enable them to carry out the dictates of conscience they possessed those attributes of the highest manhood,—courage and physical perfection.

Filled with enthusiasm, and knowing well the hardships and dangers which were before them, they braved the Atlantic in ships which would be considered unsafe as coasters to-day. Poorly equipped to meet savage races, and, in many instances, ill supplied with provisions, they sailed away on the voyage that immortalized them as the Pilgrim Fathers. For years these men braved a thousand dangers. They were the pioneers in a strange land filled with savage tribes who, in many cases, looked upon them as invaders, to be killed off at the first opportunity. Only the highest type of manhood could prevail under such conditions; and that it existed is shown by the New England men of to-day. Wherever high civilization exists in America, wherever men strong in intellect, foremost in business and professional life, are seen, it will be found that the elements of strength and greatness which have resulted in success can be readily traced back from generation to generation to the sturdy stock that, single-handed, under the banner of equality and justice to all, conquered the New World.

The generations of to-day in New England, and, to a great measure, throughout the United States, owe everything to this infusion of forefather blood that brought courage and physical perfection with it. It crops out in every city in the land; the men of mark in nearly every branch of life boast of it, and proudly refer to their ancestry; and it is one of the dearest heritages of the American of the nineteenth century to be able to say, "My ancestor came over in the *Mayflower*." This ancestor may have been a plain cobbler or a clerk; but the modern descendant knows that he must have been a man in all the term implies to have made the fight under such conditions.

What the people of New England are to the forefathers of American history the rising generation of to-day on the Pacific Slope is to the pioneers; and that they are in a full measure doing credit to their ancestry goes without saying. It is a most interesting question, a subject which will grow in interest as time goes on; and not only will the historian and the ethnologist, but the people at large, watch with interest the work accomplished by the sons and daughters of the men and women who first climbed the Sierras

and looked down upon the fertile valleys of the Golden State. While the forefathers were the gradual conquerors of a continent, the pioneers, undergoing in many cases even greater hardships, were the conquerors of the Pacific Slope. They were men of steel, from whom great deeds are to be expected, and from their descendants in generations to come. The two bodies of men present many similar characteristics. The forefathers were actuated by a desire for religious liberty, personal advancement and absolute freedom. The pioneers were men who needed more room, men of adventurous and manly spirit, men who desired to benefit themselves and the nation by investigating its wonders and resources; and to accomplish these results they underwent in many instances privations and dangers that pen cannot describe. They started overland to conquer unknown lands; single-handed, they marched into the domain of savage tribes, prepared to meet them ten, yes, a thousand, to one. They encompassed unheard-of difficulties, overcame all obstacles, and carried the banner of progress and high civilization from the Atlantic to the Pacific, completing the work it might be said the forefathers began at Plymouth Rock. The original development of California was begun by these men. How is it being carried on by their sons? An answer to this lies in the present prosperity of the State. The pioneers have in many instances laid down the burden which has been taken up by their sons. Volumes could be written on the attainments of the rising generation, in every profession, in the arts and sciences. In the city of San Francisco this is particularly noticeable; and the rule is that the sons of the founders of this western empire are well sustaining the reputations for energy and pluck established by their sires.

An interesting feature of the lives of these sons of pioneers is the fact that many have attained unusual prominence early in life; and it is to this class that especial reference will be made. One of the greatest corporations of the world has for its second in command the son of a pioneer who is hardly forty, yet whose strong hand as a power in the line indicated is felt,—not only throughout this country, but wherever the channels of modern business and enterprise flow. I refer to Col. C. F. Crocker, the vice-president of the Southern Pacific Company, one of the most powerful institutions of its kind in the world. The history of the elder Crocker is too well known to dwell upon. In brief, it may be said that he was a type of nation builders; and when the history of the heroes of the American nation comes to be written he will occupy a leading position as one of the powers that forged the steel chain that now connects the Atlantic and Pacific. The man was a latent power that but required just the conditions which existed from 1849 on, to develop; and his monument stands on almost every acre in California, while his epitaph is written in the commercial prosperity of the day. From such stock our English scientist might well expect great things, and that the son is worthy of the father is well known. Col. Charles F. Crocker is probably the youngest man holding so important a position in America in connection with any railroad system, and shares the great responsibility with C. P. Huntington, one of the originators of the great system, and the builder of the Central Pacific. Col. Crocker was born in Sacramento in 1854; hence he is but thirty-seven years of age. Reared in the lap of luxury, without any especial incentive for work, intellectual or physical, he has by virtue of his attainments stepped at once into one of the most important and responsible positions in railroad circles in this country or the world.

Many sons with such a life before them would have held back and preferred a life of ease to the responsibilities which already loomed up on the horizon; not so with the subject of this

COL. CHARLES F. CROCKER,

Vice-President Southern Pacific Company.

sketch. From his youth he began the schooling and preparation that fitted him so pre-eminently for the position he fills. To have an intelligent grasp upon the situation was to be especially fitted for it; and the vice-president of the company is master of not only his own department but that of all in the upward ladder, having worked his way up in a manner peculiarly American and peculiarly result producing. One of the first positions he held was that of clerk in the office of the Oakland Division Superintendent, where he stood on equal terms with other clerks, and won his way upward entirely on merit. From the humble clerkship he passed to the general freight office in San Francisco, and so on until he was the claim adjuster of the company, and had a grasp upon the internal workings of the vast machinery of the company that few possessed. Appreciation of his knowledge of affairs came now in his election as third vice-president; and in 1888 he was elected second vice-president of this vast corporation. In the absence of its president he is the virtual head and front of the company,—competent to bear its great responsibilities, and with a future before him without apparent limitation.

In mercantile life we find another member of this family, the junior member of the publishing house of the H. S. Crocker Co., one of the prominent figures in the commercial world of this State, who has inherited all the vigor and mental strength that characterizes the head of the house.

From the field of the railroad it is but a step to that of the banker and financier; and following out the idea of selecting men, the sons of pioneers who have attained great prominence in their several lines early in life, we may take as a type Richard H. McDonald, Jr., vice-president of the Pacific Bank of San Francisco. To tell the story of such men as Charles Crocker, R. H. McDonald, Mark Hopkins and others is to relate the story of the pioneer days so often told. They and their comrades are well known as the builders of the present commonwealth,—the men who laid the foundation upon which the State has grown to its present proportions. The history of the elder McDonald reads like a romance.

Few families in America have so interesting an ancestry as the McDonalds, the family having been traced back by John O'Hart, the well-known genealogist of Dublin, many centuries to Marcus the son of Aengus Oge, the Scotch lord of the Isles, who married a daughter of Olahan, Lord of Derry, Ireland, whose clan was one of the most powerful and illustrious in the history of the British Isles.

If an ancient name and all the concomitants of a strong personality through generations count for anything, the progeny of this man should be in immediate touch with the present growth and development of the country. This inference is borne out by fact, Richard H. McDonald, Jr., being—while about the age of Col. Crocker (not yet forty)—the vice-president and active spirit of one of the most influential banks on the Pacific Coast, an institution which in the magnitude of its interests takes rank with the great banks of the country. So young a man is rarely found in such a position; and, as in the instance of Col. Crocker, it is not home influence or because he was the son of his father that gave him the position, but rather that he was in every sense of the word his father's son,—inheriting all those sterling qualities that have made the elder man an honored and striking figure in this State. The every-day history of such men as these is not merely of interest because personalities happen to be the fashion; but the facts are valuable to the rising generation, to the young who are to be the men and rulers of to-morrow.

Brought up with every luxury, without the incentive of necessity to earn a living, the young man early in life showed evidence of the mental attainments that later were to be brought

RICHARD H. McDONALD, JR.,

Vice-President Pacific Bank.

into play in the management of large things. As a youth he showed strong intuition, a desire for knowledge and wisdom beyond his years. To this was added strong convictions as to what was just and right, making a most promising combination in a youth of but a decade. In 1861 the young man was taken East, where his education began during the stormy times of the New York riots. Appreciating the value of an education, and determined to prepare his son for the highest positions he might be called upon to fill, the father sent the young man to Germany, where in 1878 he was a matriculated student at the famous University of Jena, which has turned out so many illustrious men, and where the famous Haeckel held a chair. Continuous residence in France and general European travel filled up the vacation time, and gave the young student an opportunity to indulge in the study of government and diplomatic usage, in which he was particularly interested. He contrasted the different forms of government, the conditions of the people, with those of America ; and his notes and letters on these and other questions show a remarkable understanding of political usage and a grasp of great questions phenomenal in one so young.

The European experience was but a beginning of his education,—a broadening introduction, as it were; and from here he entered business life for a year, traveled extensively throughout his own country, finally entering Yale College, from which he graduated with honor as Bachelor of Arts in 1881. After a vacation in Europe he returned, entering the Senior Class of Harvard, graduating with renewed honors and a degree in 1882. Mr. McDonald now entered the Pacific Bank, founded by ex-Governor Burnett, and then under the presidency of his father. He began at the foot of the ladder in a subordinate position, spending his days at the institution in practical incursions into banking, while his nights were employed in studying the theory and practice of modern finance.

So much application did not pass without its reward. The young man rose step by step, leaving his mark in every department of the institution, until he was finally elected vice-president, the second position in the institution; and the growth and development of the bank during his connection shows the wisdom of the choice.

Mr. McDonald has risen to a position that few attain until their hair is well silvered ; yet he is not forty, and instead of resting on his oars the work goes on. There is probably not a harder or more conscientious worker in the State. Night and day his energies are devoted to his duty. He is the man at the wheel, and every turn must have a definite meaning upon the course of the financial ship ; a man of affairs, in touch with vast interests, with the executive ability to guide them aright; a remarkable judge of men, with an inherent power to command; a man with a future in any direction he might turn,—such is a type of a financier, the son of a pioneer. This is the brief story of a man's life from acquaintances on 'Change. Said a banker: "Mr. McDonald is to our business what General Howard is to the army. Everybody knows the latter is a famous fighter; but he is a philanthropist with strong religious predilections. So with the San Francisco banker: he is a general in finance; but in his hours of ease his mind turns to philanthropic pursuits. Having enjoyed all the benefits of liberal education, he early became interested in the work of aiding young men in their fight single-handed with the world; and to this end he has long labored, in many directions only known to those who have been lifted higher by him. Such is the man and banker,—generous to a fault, possessed of indomitable energy and determination; building up, that he may aid all humanity, and living to make life better, easier and brighter to fellow-travelers less fortunate. Mr. McDonald has large

interests throughout the State, has done much in the great developmental experiments of the day. Offices of public trust have been tendered him from time to time; and while importuned to enter public life, and his advice often sought on important public questions, he continues in the field of his choice. What Mr. McDonald's motto in life is, may not be known; but the following words from the lips of his father, found in his biography and originally included in a letter to his sons, might well have served as his inspiration: "I have tried as best I knew how to lead by example and precept an industrious, honest and Christian life, without ever injuring willfully, in thought or deed, a single fellow-man. In all my eventful career I have fixed my trust on high; and I begin to feel that I have fought a good fight. I have finished my course; I have kept my faith." Noble words, worthy of being transcribed on the memory of every young man.

We have glanced at sons of pioneers in the several fields; and it would be of interest, did space permit in the present paper, to follow them through the various professions, selecting some individual especially prominent as an illustration.

The family of Henry Mayo Newhall would present interesting examples. Here was a vigorous pioneer whose ancestors were among the first to press American soil in search of perfect freedom and religious liberty. The Newhall family is one of the most distinguished in Essex County, New England, of to-day, and exercises a powerful influence in affairs of State. The Newhalls were among the founders of Lynn, Massachusetts. H. M. Newhall, the founder of the California branch of the family, well represented the sturdy pluck that characterized his ancestors, and in coming to California in the early days passed through many experiences similar to those of his forefathers when they landed on the bleak shores of New England in the sixteenth century.

Mr. Newhall early became an important figure in California's advancement. A broad-minded man of high culture, he started many measures that will long be monuments to his memory. He was a typical example of the Californian landowner. Having faith in the soil he became the owner of the fine ranches Piejo and San Miguelito in Monterey County, of the Suey Ranch in San Luis Obispo and Santa Barbara counties, and of the famous San Francisco Ranch in Los Angeles and Ventura counties, not to mention other tracts of farming and stock land in various parts of the State. On the latter are the towns of Newhall and Saugus. The sons of this pioneer well represent the father, having inherited all the qualities that made him the man of mark he was.

In their various professions they have become prominent figures; and the vast ranch interests are conducted by men who have not only had the benefit of their father's experience in California farming, but of the highest education and the experience and broadening results of European travel. It would be an interesting experience to many a European farmer of to-day to meet the present owner of this Californian farm upon the ground. He would find that ranching or farming in California did not necessarily confine a man's thoughts to a limited area, but that here was a farm conducted by a farmer of a new type,—a man of high culture: a scholar who could direct his ranch in all its detail, and yet be a man of the highest culture and refinement, suggestive of the truism that agricultural pursuits, at least with the environment that California affords, ennoble instead of having an opposite effect that is by some writers claimed.

In the future, when the history and lives of the sons and grandsons of the Californian pioneers are written, it will be found that the race is a superior one, inheriting all the characteristics which have suggested the present paper.

MISUNDERSTOOD.

By Estelle Thomson.

A CHILD once opened eyes that smiled
Strange things: for always, heard by him,
Were soft, wild sounds none others knew.
Winds stirring down the forests dim
Moved leaves to speech, to his fine ear;
The trees' sap sang; and blades of grass
His whispered questions answered back;
While flowers found tongues where he would pass.

Where others won wide human love,
This youth was shy. Misunderstood,
He moved among his kin, aloof.
They said: "He sees no other good
Than hills and fields and woods can bound."
And he, hurt to the heart, knew not
To heal the breach, and silently
Clung firmer to his native spot.

Clung firmer, as the swift years rolled;
Drew close and closer to his own.
Learned every mood of changing wind,
Each streamlet note, each forest tone.
The insects taught to him their call,
The birds their cry; and sweet
Rang in his ear the stories told
By summer's showers and winter's sleet.

But once there came a day when still,
With folded hands across his breast,
This shy, grave man, Nature's true friend,
Lay hushed into eternal rest.
And one by one, with silent tread,
Neighbors and kindred turned to pay
Their last respect to him who long
In calm reserve had passed their way.

'Twas then, within his fingers' clasp,
They found a packet closely tied;
Its contents touched their hearts who read,
In that gray dawning when he died.
For here, his great true soul laid bare,
Was need of *human pity* shown;
And those who listened spoke through tears,—
"We might have loved him had we known."

AT THE DRY TORTUGAS DURING THE WAR.

A Lady's Journal.

(Commenced in January number.)

[The history of the late war has been well described in various publications, but that portion relating to the famous Dry Tortugas prison, where thousands of men were kept during the war, and where those connected with the assassination of President Lincoln were confined, has never been described, yet the events are now of great historical value. The island upon which the great prison was established was a sand bank comprising but thirteen acres,—one of the last of the keys representing the end of the great Florida reef. For seven or eight years a lady, the wife of one of the surgeons, lived in this isolated spot and viewed all the incidents from the appearance of the first war cloud until the declaration of peace. The following chapters were not written or intended for publication, the events being jotted down simply for friends in the North; and THE CALIFORNIAN has been enabled to give them to the public in a series of chapters, believing that many are of historical interest and value, and also as showing the singular life of a lady in one of the most out-of-the-way spots in this country. This chapter is illustrated with views of the great prison, the largest stone fort on the western continent.—EDITOR.]

THE Fourth of July of 1860 passed very quietly. Our greatest annoyances now were the delay of the mails and the scarcity of good things to eat. We wearied of canned food, and pined for fresh vegetables that were not. Even green grass to look at was at a premium. Green turtle and fish we had in abundance, and, occasionally, a pig was killed; but we longed for more variety. The fowls were poor from not having the proper food, and coral sand did not answer as a substitute for gravel. We sent to Key West, sixty miles away, for any and all kinds of vegetables that Captain Wilson could find; but he returned with the word that there was nothing in Key West but a few onions, which were quoted at one dollar per small bunch.

We had excellent rainwater to drink, caught during the rainy season in large reservoirs. Ice was an unknown quantity on the Key, and twenty cents a pound in Key West. If we had ordered it, and there had not been a stiff breeze, it would simply have resulted in our providing the boat's crew with ice water, and having the pleasure of paying for it; so we kept our drinking-water in porous jars called monkeys, which hung in the shade, keeping it sufficiently cool. The butter would have been benefited by ice if we could have kept it all the time, but to be frozen one day and dealt out with a spoon the next would, in all probability, have had a bad effect upon it; so we kept it in as cool a place as we could find, and it was a test of the temperature whether a knife or a spoon was placed by the side of the butter dish. It was usually a feast or a famine, and just at that date the latter state seemed to prevail.

The flour grew poor; the weevils shared it with us; we could see them flying in the air near the casemate where a quantity of flour was stored. We grew hungry for even some of the lean things of the land; but we did not lose our spirits or cheerfulness. The first of August a steamer arrived with our own private stores of canned fruits and vegetables from New York, and, better yet, with news of an appropriation for the forts, which meant more comforts in the way of livestock and new life generally.

The mail boat brought us bananas, fresh beans and, best of all, a box of good things from home; and to say that we were excited and happy rather proved that we were previously in much the same state Aunt Eliza complained of when I tried to hurry her,—"stagnated."

During August and September we had a succession of fearful thunderstorms that frightened me more than I cared to admit. They continued for nine days in succession. Even the old fishermen acknowledged them to be unusually severe. The thunder echoed and reverberated through the arches so that it seemed as though the whole fort was going to tumble down about our heads.

The heat was intense, and the mosquitoes distracting. As the *Tortugas* brought no mail, a month without letters was almost as trying as going without food. August found us in low spirits.

Finally the transport arrived, bringing us fresh beef, the first we had seen in four months; and, having some onions and potatoes, we feasted. The great delay was thus explained by Captain Wilson: he had purchased some fresh meat for the fort, and was all ready to sail when a squall came up without warning; and he was obliged to take it back to the butcher's ice-box and wait for the gale to subside. When it had spent itself he made another purchase; but the elements were in a capricious mood, and, fearing a calm would be as disastrous to his cargo as a gale, he again appealed to the butcher, who this time refused to take it back, and it was packed in ice, we reaping the benefit.

Aunt Eliza often spoke of "broiling her brains it was so hot." I now felt that it might almost be possible.

The rainstorms continued up to October, but more gently; yet to the north of us a number of wrecks were reported.

It did not take much to rouse the residents of the island to a state of excitement; and when the *Tortugas* came back one morning, after having started for Key West, with a deserted wreck in tow, a crowd soon assembled.

It was a sad sight. Both masts were gone, and there was a great hole in the side which had been stopped with the bedding. The rudder was gone, but they had made a temporary one, which suggested that the crew had survived the worst of the gale and been taken off, which was the case, as we heard that a vessel from New Orleans, bound for Liverpool, picked them up and landed them in Havana.

There were fifteen on board the hapless craft, some women and children. The vessel was from Trinidad, bound for Cuba, loaded with fruits in glass jars, and wines, which were afterwards sold in Key West. Several dismantled vessels went into Key West that could not make our harbor. One that was spoken was out of water and provisions. They hoped to make Key West, but, as they did not, it was feared the vessel went down. The gales at that season were to be dreaded as there was so little warning; and yet they did not call them hurricanes, which they were to all intents and purposes. Even Aunt Eliza began to tire of the Dry Tortugas.

She was evidently in a "low-down state," as she announced one day that she was "De only one lef' of all her fambly."

Thinking she had heard some bad news, I asked, "Where are your brothers?"

"Oh," she replied, "dey is in Sabanna, but dey might as well be dead; I neber see um 'gin," and she would "not las' long herself. De rheumatiz got above my knees now." Then she would take her pipe and smoke until she was dizzy.

About the middle of October we had our first norther. The mercury fell from eighty-five to seventy-five degrees; and we all took heart as we inhaled the cool air.

Just before the norther a vessel drifted upon the reef off Loggerhead. Had the norther held off a few hours even, she might have been floated, as the wrecking-smacks were trying to lighten her; but there was no hope after that. She was driven up where the sharp coral crushed a hole in her; and the water was soon even outside and in.

There was a rumor that the vessel was allowed to float upon the reef, which would account for the wreckers being so promptly on hand. Such things had been done; but no one felt positive enough to make such an assertion openly.

I was glad to have the hurricane season pass without a genuine one. As an example of the suddenness of the squalls, one day while we were at the dinner-table it grew suddenly dark; we rose, walked through the hall to look at the clouds, and before we could return to the foot of the stairs, half way from the front door, the squall struck the island with such violence that a chair, standing before a long window on the second floor, was blown across the room and hall and half way down the stairs, and the rooms flooded with water, while it grew so dark that we had to light the lamps. No wonder we were glad to have the season for such performances over.

The irregularity of the mail was exasperating, as it was our only connection with the outer world; and to wait three weeks again for a letter or any news from the North made us almost desperate.

The last detention was caused by a disabled steamer at the mouth of the Mississippi River; for our mails came in various ways, there being no regular mail contract for Key West. The railroad was under water up the coast, so the mail was sent to Mobile to reach the New Orleans steamer. The schooner *Tortugas* waited a week for the mail, then started to come down without it, but sighting the steamer returned, even then being becalmed twenty-four hours in sight of Key West.

A rumor now reached us that Captain Woodbury was coming with Captain Meigs* by the next boat, which meant a change in the command.

We watched most anxiously for the boat, spending the afternoon on the ramparts with the glass; but the horizon showed nothing that came out of the regular course to New Orleans until nearly night, when we discovered the black topmasts of what we thought was the *Tortugas;* but it was so calm there was no hope of her reaching us for hours.

We could see the wreck away on the other side of the fort with its fleet of schooners looking like a harbor in the midst of the sea; but the darkness came on with the *Tortugas* scarcely any nearer. At ten o'clock there was no word, and by midnight we gave it up and went to bed, to be awakened by the watchman calling to the clerk of the office that the mail was in. Of course sleep was out of the question until I knew of the arrivals, and how I should manage if the guests had arrived.

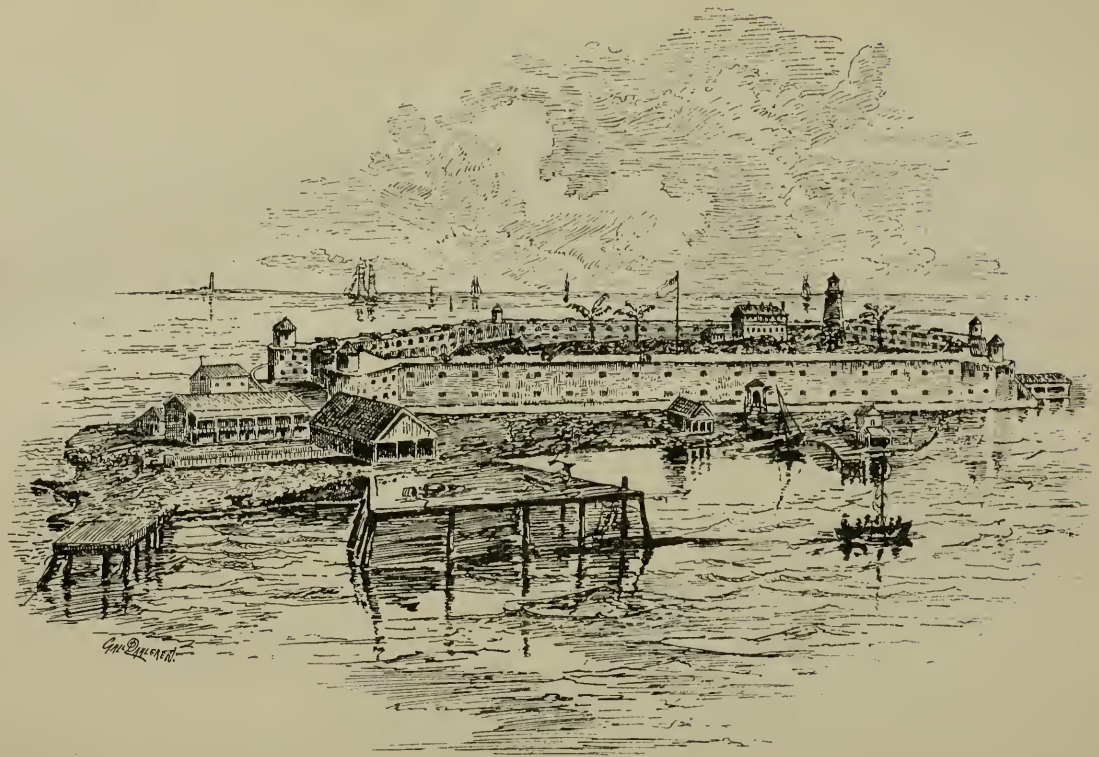
Captain Wilson had been ordered to have the flag at the peak if the strangers were on board, but in the darkness we could not see. After a while one pair of feet only came into our hall; and we soon heard that there was no mail, that Captains Woodbury and Meigs would come on the next boat, also that the mail contract had been given to the *Isabel*, and that hereafter we could look forward to a regularity in the arrivals,—a great relief.

Disturbing political rumors that for the past six weeks had been in the air without giving us any special uneasiness seemed to increase; yet we gave them little thought, considering them as evidences of a strong party feeling, perhaps increased by the nomination and election of Lincoln.

Being surrounded by people of Southern sympathies, we heard little except their side of the question, and the one of appropriation for the forts. The latter was an all-important one to them, as, if it failed, there would be hundreds of slaves without employment,—a serious matter to slave-owners who had to feed and clothe them.

The next boat brought Captain Woodbury, Captain Meigs, his clerk, Dr. Gowland, and Mr. Howells as draughtsman.

* The late Quartermaster-General, General M. C. Meigs.



Fort Jefferson,—Dry Tortugas.

Captain Meigs accompanied him to Key West, returning by the next boat, which also brought a friend and her maid, to make me a long-promised visit, and my husband's brother,—the latter a most delightful surprise. My new cook proved a treasure; and all this made quite a revolution, and for a few weeks I felt that civilization had overtaken us. My guest brought her beds for herself and maid, needing them on the boat; so that they were provided for.

We enjoyed the bustle and commotion of people about us, and the return to some of the conventionalities of life, which so much time spent upon the water had interfered with. To add to the life infused by all this, a man-of-war, the *Mohawk*, Captain Craven,* came into the harbor. The following day I gave a dinner party of twelve covers to Captain Craven and his officers. With a market sixty miles away, one's wits did extra duty. But the dinner was apparently a success, if one could judge by the appearance of the guests; and to us, who had been so long deprived of society, it was a delightful occasion. The next day the gentlemen took the *Tortugas* and went fishing, and the following week was a gay one for all.

Threatening news came by the next boat. Sometimes when we heard Captains Meigs and Craven, who were so recently from the active world, discussing the state of feeling in the South, it made us a little apprehensive, but that soon passed away. The idea of a civil war seemed impossible.

A few weeks later it became so desolate at Tortugas that I accepted an invitation to visit Key West.

The climate here was perfection at that season of the year, with much less wind than we had at Tortugas; and it was a delight to go about the streets, into real stores, and to visit people after our seclusion for so many months.

During my visit Captain Craven arrived with two slave ships, captured off Havana, that had just started for Africa.

The following day came the election for candidates to attend the Secession Convention held in Tallahassee. The secessionists were victorious, and announced boldly that they would take Fort Taylor at Key West.

Rumor also said there was no money in the State treasury; that the Governor had taken it to send North for ammunition.

A rather decided secessionist told Captain Brannon, who was in command of the fort, that they would starve them out. His reply was that he could drop a ball into his house that would bring out all the provisions they wanted.

I wondered at the good feeling where so much spirit was displayed, and tried not to be drawn into any discussion, as I could not believe there would be anything more than a war of words.

The day before Christmas Mr. Philor placed his carriage at our service, and we drove to some gardens where all the trees and shrubs were new to us, a perfect tangle of tropical growth, even to a Banyan tree. Then we drove to the fort, which was the end of the drive in that direction, and to the barracoons where the slaves were kept until they could be sent to Africa. Those here were taken by the U. S. S. *Powhatan* some months before. It was a sorrowful sight, and brought home the horrors of slavery more intensely than anything I had ever seen before.

Christmas was more like a Northern fourth of July in temperature and noise. We attended service in the morning, met numbers of our friends, and spent a most delightful day; and at night some of the officers of the *Mohawk* gave us a serenade that made a delightful ending to the holiday.

Captain Meigs stopped on his return from a trip to Havana, bringing the news of the secession of South

* Captain Craven later went down with the *Tecumseh* at Mobile Bay.

Carolina, Captain Hunt joining him to talk over the outlook. It began to look cloudy at least; yet no one thought there would be civil war.

The next Sunday a proclamation from the President was read in church "of a day for fasting and prayer" on account of national trouble and the prospect of a civil war.

The few remaining days of our visit were spent in returning the calls of the many pleasant people who had entertained us. There were so many delightful people and homes it was sad to think what might result from the feeling that would show itself in spite of all courtesy.

Captain Meigs and my husband talked of a trip to Tampa, after which we were to return to Tortugas, as we had already remained away longer than we intended.

On January 1, 1861, a rumor came that Mordaci, the owner of the *Isabel*, had offered her to Carolina for a man-of-war, our mail contract going with her.

There was a cloud on the horizon that looked larger than a man's hand, and it affected our spirits. People began to be suspicious of their neighbors. Those who claimed to be Northern sympathizers owned their servants. There were many Southerners in Key West; but a goodly number were originally from the North, who, dwelling many years in that climate, and owning simply their house servants, were doubtful whether, if Florida seceded, they ought not stand by the State of their adoption. The Northern residents who did not own slaves were true Unionists from the first. The slave seemed to be the turning point. The Conchs, as the people from Bahama were called, were boisterous in their demonstrations of loyalty to the South; but, at the first suggestion of their doing duty in case of necessity, they packed their goods and sailed for the British Isles.

One morning the first news that greeted the gentlemen on the street was that the militia of the town had attempted to take Fort Taylor during the night. A futile effort, however, as Captain Brannon had sent the two companies of regulars from the barracks the night before after dark, leaving the harmless gun carriages covered, so that no one suspected the removal of the guns. Captain Hunt had turned the workmen into soldiers, and they had been employed all the previous day in taking the wharf away and every available means of entrance; so that an unexpected bath would have been the result of the attempt to gain entrance over the planks innocently leading to the open spaces.

A great state of excitement now prevailed. Letters that were sent to Washington were opened and destroyed; and our own from the North were delayed purposely, and sometimes not forwarded from Charleston, so that we began sending our mails north *via* Havana.

I was beginning to weary of the very name of secession; for there was little else discussed, and it made us gloomy if we allowed ourselves to dwell upon the outlook, although no one yet admitted that there was to be a war.

Affairs began to assume such a serious aspect that Captains Meigs, Hunt and Brannon held a council on board the *Mohawk*, resulting in our leaving for Tortugas the next day. Captain Maffitt met with the officers, but he resigned the next morning, leaving his ship there; he afterwards commanded the Confederate privateer *Florida*.

There were joking remarks made by our friends that if we found the fort in possession of the secessionists we could return,—not in the least cheering to us, although we treated them with as much levity as they did; but I think when we were near enough to our little island home to discern with a glass that the flag that floated over it was the stars and stripes it was a greater relief than, perhaps, any of us wanted to acknowledge.

Our defenseless situation was almost an invitation to the enemy to capture

us; and why they did not was rather a mystery. The *Wyandotté*, we heard, was on the way to take possession of both forts, and could have taken Fort Jefferson simply by steaming in and claiming it; for there was not a gun on the island.

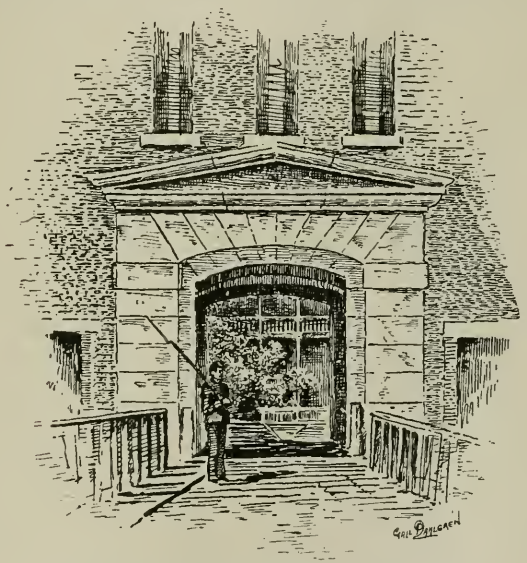
Active work began on our return. A drawbridge was made and raised every night, all communication with the outside being cut off.

The evening of the seventeenth of January Captain Meigs called, and I remember his reading Shakespeare aloud, and discussing some of the historical plays with my husband. They were both students of Shakespeare. In the midst of it Mr. Howells came in saying that the sheriff had arrived from Key West to arrest the fishermen, and they had sent for Captain Meigs to intercede for them.

The facts of the case were that the State of Florida had made a new law that none of the fishermen could obtain a clearance to go to Havana without paying a fine or license of two or three hundred dollars. Of course they could not pay it; and the object was to drive them home. They were mostly from Connecticut; and there were then fourteen smacks in the harbor. They came down every winter to fish, taking their catch to the Havana market.

Captain Meigs sent word to them not to pay it, and to the sheriff that he was Governor of that island, and he had better return to Key West. Then he sent Mr. Howells off privately that night to Key West for guns. He felt it was time to take the responsibility, even if he was censured for it.

I asked if he apprehended any danger. He looked at me as though he were thinking whether it were best to alarm me, and said: "No, Madam, but I want to be prepared in case of emergency. If we had a few guns we should not be molested. Guns are not so much to use as to keep people away."



Sally-port and Drawbridge of Fort Jefferson.

He was the man for an emergency; and I think General Scott, instead of censuring him, praised his prompt action fully.

The following morning, January 18, 1861, our excitement culminated in the news that a man-of-war was in sight, and steaming up the harbor.

Every one was wild with excitement, running to the bastion with glasses to see what flag she floated; yet even that might have been a deception if it proved to be the red, white and blue. But she carried no flag, a fact we considered suspicious.

Captain Meigs sent Dr. Gowland to meet them as they stopped outside the reef, sending a boat ashore in a spot known to us as very dangerous, unless the navigators knew the channel exactly. It was a narrow opening in the reef, called the "five-foot channel," and only used by our small sail-boats. Dr. Gowland carried orders, that if they were enemies they could not land. A verbal resistance was the only one he could offer; but as soon as the two boats met a signal was given to those on board the steamer, and the stars and stripes flew to the masthead. The feelings of those who were watching from the fort can be better imagined than described; and none of us realized the tension we had been under until this relief came.

It proved to be the steamer *Joseph Whitney*, with Major Arnold in command, from Fort Independence, at Boston, with troops for our relief.

The reception they received must have left no doubts in their minds regarding their welcome. We were more than overjoyed; and the commotion and excitement of unloading the steamer, for she was to return immediately, as her expense to the Government was six hundred dollars a day, was something that tested the ability of every one. It did not take long to put us in a state of defense and everything in military order. We were now aroused at sunrise by the reveille. A sentinel walked in front of the guard-house, at the drawbridge, and one was posted in the lighthouse tower.

Already our quiet life was a thing of the past. The large guns came from Key West, were soon mounted, and we began to feel as though we were on a war footing. Yet with all this Major Arnold did not think there would be war, and we surely hoped not. The New Orleans boat was taken off, and our only method of sending and receiving mail was through Havana, where the schooner *Tortugas* was sent for it.

The papers now received were old, but did duty all over the garrison. The officers would meet and discuss the prospects; but even the firing on the *Star of the West* in Charleston harbor did not convince Major Arnold that we would have war.

I presume we heard strange rumors that never made an impression at the North, they were so quickly followed by others of greater importance. The news from Pensacola was warlike. Two thousand men surrounded the fort; and the commanding officer's wife going into town to do some shopping was taken as a spy and detained as a prisoner. It was said that the Senator from Florida, before he resigned, examined the plans of Fort Jefferson and Fort Taylor in Key West. Captain Meigs thought if he came there then he would find something not in his copy.

When Florida seceded she reappointed all the old Government officers; and my husband was told that under the new law he was a member of the Engineer Corps.

Those were very exciting times to us, not that we expected to be attacked, but we were within the line of attraction. We heard that the officers in Washington had concluded to send their families out of the city. Captain Meigs advised his family to go to Philadelphia. How strange it seemed to think of such things in our own country.

At this time two large ships-of-war came in bringing guns and news of more troops on the way. One of the ships came from Portsmouth, N. H., where it was thirteen degrees below zero. Major Arnold said that he expected to find us in the hands of the secessionists. General Scott gave him orders that if the fort had been taken to retake it if possible; if he failed, to cruise around Fort Jefferson for sixty

days, with the understanding that he was to be reinforced by a war steamer from Pensacola. January 22d the *Mohawk* came back to ply between Key West, Havana and Tortugas regularly. All the able-bodied men had been put upon the roll, and guns and ammunition dealt out to them. At that time there were in the harbor two steamers of war, one side-wheel steamer, a revenue cutter, two barges and some dozen sloops and schooners. We were no longer out of the world; yet the steamer *Magnolia* from New Orleans stopped and left a month's collection of mail.

The last of February brought news of the secession of six of the Southern States, and that a Southern confederacy had been formed at Montgomery, Ala., with Jefferson Davis as President. On March fifth Lieut. Gillman arrived with Major Tower of the Engineers, having arrived in Havana from New York just in time to come over in the *Tortugas*. Lieut. Gillman belonged to Lieut. Slemmer's command at Fort Pickens. He was granted permission to go through the invested district, but preferred going that way and landing under the protection of the stars and stripes.

The two coast survey schooners were there at the same time with Lieut. Tirrell and three assistants on their way to New York. They were at Charleston Harbor, but their tents and instruments had been stolen, and they concluded to go to Havana, sending their schooners home; but we kept one of them, as the *Tortugas* had to take Lieut. Gillman to Pickens with dispatches from General Scott to Lieut. Slemmer.

Soon after this we had a great disappointment in the order that came for Captain Meigs to return to Washington. We could not help rejoicing on his account, yet felt that half the life of the place would go with him.

Captain Hunt came down from Key West to take charge until relieved; but fortunately for him the New Orleans boat came near enough that night to quietly send a boat ashore with Lieut. Reese, who had unceremoniously been put out of Fort Gaines at Mobile, without even having time to remove his personal property. He came to assist Lieut. Morton, whom we expected to fill the place vacated by Captain Meigs.

Lieut. Reese said that he was looked upon with great suspicion on board the steamer, as he was taken out to it in a small boat ostensibly as a passenger for Havana; but he told his story to the captain, who made an excuse to stop for fuel, and so landed him, as much to his own surprise as ours.

He of course had news from the Southern posts to give us in exchange for much that we could give him, for he had been entirely alone. All the workmen left him; but he could not leave the fort until he had orders to do so from Washington or it was taken from him, the latter not a difficult thing to do. He was very glad to get among friends, and was a pleasant acquisition to our now constantly changing society.

One day a little smack came into the harbor flying the Palmetto flag, the first we had seen. Major Arnold sent word for him to haul it down, and put up the proper colors and salute them. He was promptly obeyed, and they came and apologized.

The steamer *Daniel Webster* now arrived with provisions and recruits, but took the latter with her, as she was going to Texas to meet the five companies that were leaving the dust of that State behind them, as it had seceded and General Twiggs had been dismissed from the army.

Work was going on rapidly. The engineer had a large force at work on the bastions, where they were to mount six heavy guns. Everything was bustle, and a great deal was accomplished in a very short time. Reports from Key West were very unpleasant. Officers of the army were followed about the streets and insulted. Some of the mob were annoying peaceable

citizens, threatening to take our schooner and Fort Taylor. One copy only of Lincoln's inaugural address came to Key West. It was kept quite a week before it reached us at Tortugas; and people there thought they could smell gunpowder in it.

I think, for its size, Fort Jefferson was one of the busiest places on the continent at this time; and the excitement was kept at fever heat, either by some stray rumor from the many vessels coming in, or the detention of the mail and a dearth of reliable news, making us apprehensive of imaginary evil.

The horizon was watched, not only by the sentinels, but by every one. I remember, one day, before the troops came, that Captain Meigs discovered smoke away to the southwest, as of several steamers moving in a very suspicious manner to us, who were so on the alert and were almost expecting invaders.

We all went to the ramparts and with glasses watched them, making out distinctly ten or twelve large vessels steaming about with concerted movements; and we could hear heavy firing. But they came no nearer; and, after watching a long time, we came to the conclusion that it was the Spanish fleet of war practicing, which we found to be the case some days afterwards, from a fishing-boat which had been near them.

The last of March, 1861, the steamer *Daniel Webster* returned, landing one company, reporting the *Rush* just behind with the other. The *Webster* came early in the morning; and just before dark the *Rush* arrived, with a band playing patriotic airs, the troops cheering lustily.

It was a motley crowd.—camp women, children, and all the paraphernalia of camp life. A portion of them had marched from Forts Duncan and Brown some four hundred miles down the Rio Grande to Brazos, where they took the steamer.

On the way the rear of the battalion had an engagement with the Indians, during which several of the latter were killed. The Indians had commenced hostilities as soon as the troops were ordered to leave the State.

The officers had sent their families home by way of New Orleans, as they did not know how long they would remain or what kind of a place they were coming to.

There was discontent and disaffection among them; and two of the officers before many days sent in their resignations, as the State they came from had gone out of the Union.

We numbered at that time about four hundred, and represented a busy little town. The fort at night was brilliant with lights, and the place was active with the bustle of many people.

All this commotion brought comforts in the way of food to us who had only seen fresh beef and vegetables semi-occasionally; for a steamer was chartered to bring us six cattle at stated times, with other necessaries.

The *Tortugas* returned from Fort Pickens with no news except that Major Tower of the Engineers was not allowed to land, having to remain on the *Brooklyn*.

Lieut. Morton and his two assistants arrived, proving a most energetic and efficient officer, one whom we liked exceedingly. He had just returned from making a survey for a route across the Isthmus of Panama. Naturally, none of the officers fancied being sent here; it was like imprisonment when there was so much excitement in the North, but they all did their duty conscientiously.

On April fourth a loud call from the sentinel on the lighthouse tower announced a steamer; and as usual we took the glasses to the ramparts, where could plainly be seen a vessel loaded with people; and on the wheel-house we distinguished officers. We felt that there were as many people on the island as could be accommodated, and wondered what it could mean. As the steamer neared the wharf, to our great surprise we recognized Captain Meigs. The other officers proved to

be Col. Brown and staff, and they had come under sealed orders. When Captain Meigs called to see us, I asked him what it all meant.

He laughed, and replied: "That is a secret. No one but Col. Brown and myself know; but what we are here for is to get some light guns, Lieut. Reese, an overseer, twenty negroes, thirty men, a scow and a load of bricks; and we can only stop two hours and a half."

They brought papers only a week old, but new to us. They had on board four hundred men besides the officers and crew, and sixty horses.

Lieut. Reese had that morning arrived from Havana with an assistant of Captain Hunt. He joined the excited party; and before dark they were steaming out of the harbor, with the schooner, scow and a load of bricks in tow.

(To be continued.)

I AM ALONE: A RONDEAU.

By Amy Elizabeth Leigh.

I AM alone from dawn till close of day.
I read my books and sing, perchance, or play
Some memory-burdened air I used to know;
Or, heedless how the stealthy shadows grow,
I pace my room and weave my little rhymes.
My friends are great soul's thoughts. When vesper chimes,
Silent I sit, while eager fancy climbs
Ideal heights;—not lonely then, although
I am alone.

Naught have I known of care that leads to crimes;
I watch the wearied ones whom toil begrimes,
As, dragging heavy feet, they homeward go,
And thank my God I need not labor so;
And yet—I envy them their need sometimes—
I am alone!

THE MADAME: A STORY.

By Paul Vernet.

A FRAIL bit of a woman clad in a black gown of no particular fashion stood in the doorway of an unpainted redwood shanty, and gazed in wide-eyed abstraction out over the landscape. Directly around the house was an acre of gorgeous bloom, its limits defined by an unpainted, high lath fence. Beyond stretched a wide extent of undulating sand-dunes, diversified here and there by ragged patches of the low-spreading bluish-green foliage of the lupin. The lupin was aglow with its stiff spikes of yellow, odorous bloom. Bunch grass grew cheek by jowl with the lupins, and dark-blue gilias thrust their heads up between, with all the pride and arrogance of unconscious smallness.

The Madame was quixotic according to the world's erratic standards. She lived entirely alone, and had no neighbors within calling distance. She was known only as "The Madame," respected, beloved, pitied, but never sought for social purposes. She seldom left the small inclosure where her flowers seemed to vie with each other to put forth the best blooms and repay her for her loving care. Once a day the boy from a dairy ranch just over the brow of the hill brought her a quart of milk, and once a month he brought her a sack of flour and any other supplies she needed. Once a year her lawyer came in a carriage and passed a day with her, going over the accounts of the year, for she was a woman of considerable property.

A winding road threaded its way among the hills to the westward, and led to the ocean. Through a gap between two smooth, yellowish promontories the water could be seen; and towards this gap the Madame's dark eyes were ever turned. Once the milk-boy, chancing upon her unnoticed, asked her if she looked for somebody's coming. With a slight start she turned the great, melancholy eyes upon him, and replied, "Yes, the Angel of Death."

The boy was not sentimental, but something in her voice made the quick tears leap to his eyes; and he furtively passed the loose sleeve of his blouse across his face as he trudged back home across the dunes.

As the Madame stood in the doorway one day, her eye was arrested by the sight of a man wearily toiling along the road that came from the sea: not an unusual sight; but those who cared enough for the sea to visit it on foot generally walked briskly and seemed to be full of life and spirit. As this man approached he left the road and came near the house. At intervals he halted, removed his hat, allowed the rough winds to play through his white hair, and once he sighed heavily. He seemed absorbed in thought. Once he stooped and plucked a white yarrow bloom, smelled it, and cast it aside again with a shudder. As he replaced his hat and toiled on, the Madame said to herself, "That man has a breaking heart;" and she felt a kinship for him. She had lived alone so long and had watched so closely the varying phases of her little world, that the veriest trifles of existence were pregnant with meaning for her.

The wanderer came nearer; once more he bared his brow and hungrily gazed out towards the sea, with eyes that saw not.

"He, too, watches for some one's coming," said the Madame; then, as the man turned his face a little more to one side, and she saw again the familiar features for which she had watched and waited day by day and year by year, her senses reeled, she

leaned heavily against the door-sash, and all consciousness left her. "Alas! how easily things go wrong!"

When the Madame's mind cleared, day had deepened into night, the raw fog poured through the open door, and the rough gale screamed around the house corners. She struggled to her feet, and creeping to the table lighted a candle. It was midnight. She shuddered. Then she kindled a fire in the stove and made herself a cup of hot, strong tea. This with a crust restored her somewhat. The rest of the night she passed in silent, half-benumbed prayer. Her voice failed in her throat; her despair seemed to paralyze both thought and speech.

* * * * *

After that, the successive days of another year dragged by. It was June once more. The gorgeous lupins bloomed. The low gray sand plants gave out their salt-sea perfumes, the bunch grasses tossed and swayed, and surging surf rumbled and roared and fainted away in the distance. Fogs crept over the land so silently as to be uncanny. The summer winds screeched and whistled in a fury of desolate mourning. A few other shanties now dotted the sand-dunes. Once or twice some men from a house a mile nearer the beach had brought a heavy burden to the Madame's door,—the chilled body of a reckless swimmer who had not allowed for the strong turn of the tide where the outgoing waters of the bay and the inrushing waters of the ocean met in mighty conflict.

It was a June afternoon. The Madame stood, as before, in her doorway. Presently the forms of two men crossed her line of vision. They walked in step, with a peculiar gait, and thrown across their broad shoulders was a stiffened burden. A terrible oppression seemed to settle down upon her as they silently entered her shanty, and deposited the body on the bed. A damp coat was laid across the face.

"Is there still life?" asked the Madame, approaching the bed.

"We don't know, Mum, but we knew if there was sorra a bit you'd find it," said one of the men. The other man spoke up saying:

"We rolled him half an hour down to our place and pumped him dry. Bill an' me 'll go in an' fetch a doctor now, if you aint afraid to stay alone for a bit."

The Madame nodded her head with assurance, and the two men shuffled out. When they were gone the Madame drew the damp coat from the man's face, and bent her eyes upon his pinched blue features. She neither cried nor fainted. Instead, her face became transfigured with a light not of this earth.

"At last!" she murmurred exultantly. "The Angel of Death has given me back my own. My beloved Sea has been more to me than has the World! The sea has plead with the Angel."

Into the beloved mouth she breathed the warm breath of her life; she chafed the stilled pulses until she could almost hear them beat. In an hour the doctor came, bringing with him an electric battery. Breathlessly the Madame awaited the first pulse-beat. Before her strained ear had caught it she had seen the closed eyelids quiver and lift; and the light of vague consciousness played in the eyes.

"At last!" whispered the Madame, bending down and drinking in the look. "Do you know me?"

"Toinette!" whispered the man, with a labored effort.

"Hush!" said the Madame quietly and serenely.

Hours passed.

The dazed eyes now wandered about the strange room. It was not one he had ever seen. Had he been dreaming? The despair of the thought made him spring to a sitting posture and moan for Toinette. The two rescuers withdrew. The doctor turned away his face. Toinette held her love in her arms and was saying hurriedly:

"I saw you a year ago. You were walking across the hills. I fainted

before I could call. Were you looking for me? Was the last barrier gone that held us apart?"

"O my darling!" sighed the man. "How I searched for you; and to think you were so near! Toinette, you will never leave me now? I felt so strange. The water wooed me. I could not find you. The water drew me down, down, down; I forgot to use my arms to swim. Where are you, Toinette? Where are you going? Come back—to my arms—my arms."

Alas! Toinette had not moved except to press him closer. His spirit was leaving this earth. It was more than the Madame could bear. The slender thread of existence had been stretched too taut,—and it snapped.

THE MOUNTAIN BROOK.

By L. Gertrude Waterhouse.

O LITTLE brook among the mountain trees,
Flow onward to the pleasant vale below.
The weary stretch of miles, the breath of seas,
Thy dancing step and dimpling face must know.
I, wandering on the ocean shore,
Sometimes look back to thee in longing dream,
And seem to see thy woodland path once more
And hear thy voice, O murmuring mountain stream.

I close my eyes, a happy child again;
I linger in the sunlight by thy side,
And roam in glee through vale and shaded glen
From break of day till rosy eventide.
I know each quiet trout-sequestered pool,
And where forget-me-nots and lichens grow;
I find the moss and fern in covert cool,
Close down beside thy waters' crystal flow.

I raise again my merry childish eyes
To view the bending tree tops, green and tall,
Beneath the canopy of smiling skies
Which arch their sunny azure over all.
My heart is heavy: through the mist of years
I seem to see the mountain home once more,
And, still undimmed by weariness or tears,
The old beloved faces at the door.

I listen for the tender twilight call;—
O little brook, flow onward in thy way;
The voices have been silenced one and all,
And I, grown lonely, wandered far away.
Still, streamlet of the rugged mountain wild,
Somewhere as then thy coolness springs for me.
Thy banks were once trod by a happy child;
And I shall hear thy echo in the sea.

SOME AMERICAN RUINS.

By Henry T. Mason.

IT has long been the boast of Europe that it is the land of the ruin. The old abbeys of England, the ancient walls and floorings of the Roman occupation, the castles of England and the Rhine,—these have been held up and shaken at the American public as possessions in which the New World was lamentably deficient and consequently lacking in interest. It is confessed by some tourists that our Niagara, the Yellowstone Park, the Garden of the Gods, the Yosemite and several other localities are of especial interest; but in the matter of ruins,—a shrug of the shoulder is given when the subject is mentioned. It is true that Americans have no ancestral castles, that their cathedrals are frightfully modern; yet when actual ruins are in question America is by no means so far behind. There are those who have not delved deeply into archæological pursuits, who believe that America is one of the most ancient possessions of man, and that if the mysterious past and romantic history of New Mexico, Arizona and old Mexico were revealed, America would stand out, so far as man is concerned, as one of the most interesting regions on the globe. What castle on the Rhine, picturesque though it may be, possesses the interest of some of the famous ruins of New Mexico? When the German castles were in their prime, when the Roman conquerors were establishing their homes and mosaic floorings on the British Islands, the ruins of America stood as they stand now,—deserted, alone, the monuments of a lost race. Coyotes howled about the sun-dried walls, and the owls hooted their mournful dirge,—the only sounds that echoed in the deep cañons. Wandering tribes glanced at them askance centuries ago, not even tradition suggesting their history or age.

The region of New Mexico and along the Colorado and Utah border is of exceptional interest. The very air has an aroma of romance. I once stood in the vicinity of some of these ancient habitations and felt the full force of the surroundings. I was alone; all about rose strangely shaped buttes,—some with flat tops, others resembling castles with great arches and colonnades, figures of the wind, shaped by the breath of nature.

It required but little imagination to see the towers and minarets of cities in the distance, and ruins all about. It was late in the evening; the sun was sinking over the desert. From the full blaze of sunshine the cliffs and buttes began to take on a tint of pink; more intense it grew, illumining the tops of the crags and lofty peaks with ineffable glory, while below deep purple shadows stole in like living things. Brighter grew the light, deeper the shadows and higher, until finally only the very loftiest crags of this mimic ruin were encompassed in the golden radiance, to be lost in the deepening shadows that slowly gave place to purples of all shades, finally to disappear in the deep gloom of the night. I should not have been surprised to have seen a body of American antedeluvians, men of the stone age perhaps, creep out of the gloomy caverns; but the only sound that broke the stillness was the breathing of my horse and the distant cry of a coyote. Then the moon arose bringing fresh beauties. The strange shapes were bathed in a silvery radiance, and seemed tipped and frosted, bringing out the weird forms in high relief, and casting deep shadows that seemed the veritable ghosts of the ancient owners of the soil stalking abroad or standing guard on their ancient possessions. Near here a cañon, deep and

precipitous, led away upward; and in it were some of the most interesting ruins the world has ever seen;—interesting because of the air of romance that clings about them; because they are monuments of a lost race, the actual pioneers in what may not inaptly be termed American primitive civilization. The richest localities in ruins are found in the tributaries of the Rio San Juan, which reaches the Rio Colorado, in Utah, after passing through a cañon nearly a mile in depth, one of the most remarkable regions in the country,—a deep cutting, winding sinuously away, telling a wondrous story of the power of water and the duration of time.

In this cañon, the Rio Chaco, the Rio de Chelle, and that of the Rio Colorado, are the monuments of this ancient people. Some are upon the ground, like the houses of the modern pueblos; others are perched like the nests of birds, high up the face of the cliff,—eyries almost inaccessible, six hundred feet in some places from the ground. Like the birds of the air, these people seem to have sought the most secluded and out-of-the-way locations for their homes, suggestive of the belief that the races of the time were warlike, and preyed one upon another. In riding up these often dry cañons the eye of the traveler notices some little prominence, and by using the glass it develops into the angular form of a habitation,—a human dwelling perched high up the face of the cliff, and resting on a mere interstice worn out by wind and weather. That human beings could live on such a shelf would seem impossible; but investigation shows that hundreds of these dwellings are still extant, tucked away in the nooks and corners of the deep cañons.

A typical cliff dwelling is shown in the frontispiece, which illustrates a grand ruin in the famous Cañon de Chelle. The cliff house was first discovered by General J. H. Simpson in 1849. It stands on the face of a cliff, eight hundred feet high, about eight miles from the mouth of the cañon. As the cliff is approached ruins are noticed upon the ground, the houses having been built upon or near what was evidently a stream of water. The ruins stand upon the north side of the cañon, the front being one hundred and forty-five feet, the depth about forty-five. Back of these, and fifty feet above, is the cliff house, built in a deep crevice in the rock, which rises eight hundred feet above it. The general design of the structure is that of the various pueblos to be seen on the Chaco. The method of building was the same, the material being blocks of small, thin sandstone, which are set into the soft mud or mortar to give stability to the wall. The walls as they stand to-day are about eighteen feet high. The rooms are small and dark, the windows being about twelve inches square. As the cliff dwelling is fifty feet above the surface, it is a question how the former inhabitants reached it, as no evidence of a pathway is seen. Ladders were undoubtedly used. The house upon the lower level was the ordinary dwelling; the upper house was used as a retreat in time of danger, ladders being used for the purpose. When a marauding horde approached we can imagine the women and children retreating to the strange eyrie, climbing up the rude ladders, while the warriors defended the homes as long as possible, then, if defeated, retreating and hauling the ladders after them. This cliff house has become celebrated, and is known as the Casa Blanca or White House. This is but one of many such edifices in New Mexico: some are inaccessible at the present day; others are reached by narrow, winding walks cut in the face of the cliff, showing still the wear of hundreds of passing feet; some are high in the air, almost invisible to the naked eye from the lowland, while others stand boldly out. There is an air of romance about these old dwellings. How many centuries ago were they the centers of life, the scenes

Home of a Cliff Dweller.

of inter-tribal warfare. The Navajos, who now live in peace in the vicinity, do not claim them as ancestral abodes. They have no traditions to point to the people who have passed away as their forefathers; and the traveler can but draw his own conclusions that these people were the ancestors of some of the races now inhabiting the Western country, and that they were a people of more than ordinary intelligence.

The first discoverer of the ruins of New Mexico was Cabeza de Vaca,

Earthen Vessel Excavated in a Cliff Dwelling.

who in 1536 traveled from Florida west to the Californian Gulf and on up through what is now New Mexico. The statements or records of the adventurer and his followers, while not remarkable for authenticity, are interesting from the fact that they show that the country was well populated at the time, and that some of the old pueblo ruins of to-day were then occupied. That the Spaniards overestimated the population is evident; thus Castenado gave the town or pueblo of Acoma* as having five thousand inhabitants. To-day it boasts of eight hundred.

Among the interesting ruins on the plains of New Mexico are those found on the banks of the Rio Grande, Rio Gila, Rio San Francisco, Rio Blanco, Rio Bonita and others. In the old provinces of *Hubates* and *Tanos*, which included the Zandia and Placer mountains, are many striking ruins; among which of peculiar interest are those of Lazaro, Los Tanques Gura, San Marcos and others, the cañon of the Rio de Santa Fé, near Cieneguillá. The visitor to the old provinces of Cicuye, Querez and Cunames will find five pueblos still in a flourishing condition, with some most interesting ruins in the vicinity of Silla and San Felipe. Much of this interesting region has been gone over by the enterprising archæologist; but a vast field still remains for the explorer. In his description of the province of Tutahaco, Castenado describes eight cities, of which five are standing to-day, while many fine ruins tell their story to the stroller. Near the foot of Mount Taylor, in the foothills that reach out from it, is the ruin of an interesting fortified pueblo. When Coronado was in this country in 1540–42, he made his winter quarters in the province of Tiquex, in the valley of the Rio Puerco. Castenado states that in his time there were twelve flourishing cities here, but to-day a series of ruins alone greet the eye, and the land that was then green and flourishing is now barren and deserted. A number of years ago some investigators discovered an ancient ruin above the Tehua town of Tesuque, literally

* See January number of THE CALIFORNIAN.

a town buried three feet below the river bank. The discovery was made by accident. The season was unusually rainy, and a torrent came rushing down stream carrying away a large amount of the river bank and exposing the walls of an ancient city or pueblo. There was a vertical wall of about twenty feet in height, the houses being two storied and built of adobe. The fireplaces were still there, and upon them the charcoal-wood used by the unknown owners. The timbers of the houses were all burned, showing that the houses had evidently been fired, and later had been gradually covered by the wind that blew sand over them, soon covering them up, reserving them as monuments of this bygone people.

An interesting ruin can be seen at the head of the Cañon de Chaco, known to-day as the Pueblo Bonita. There is a large building surrounded by a wall of adobe inclosing a yard, the sides of which are nearly two hundred feet in length. Like most of the work found here the walls are of extreme thickness, being in some places two feet thick and formed of plates of sandstone. The sides of the square to the south and west are formed of a three-storied edifice, which on the inner side descends in terraces. The ruin is well preserved. The first story is about seven feet high, the second nine and the upper six. The outer row has ten good rooms, each being about twenty feet in length and six feet in width; some are dark, evidently used as storage rooms. All in all in this house there are about one hundred rooms; so that three or four hundred people may have lived in it in times gone by. The doors from one room to another are small, generally three by two, the windows being about two feet square. No stairs were found, so it is assumed that the occupants used ladders to go from one story to another. Around about this building bits of pottery are found, and undoubtedly thorough investigation would result in the discovery of many articles of great interest.

All through New Mexico and Arizona we find these interesting ruins telling the story of ancient occupation. Much work has been done here by individuals and the various institutions of this country to restore them and hunt up their history; yet so far but little is known. We may assume that the dwellers in the cliff homes were the ancestors of the races now living in the pueblos, but as to actual proof it is lacking. One thing is evident, that these ruins of America are far more interesting than many in Europe, and are the stepping-stones that connect the present with the earliest days of American history.

A CALIFORNIA COLONY.

By Wm. H. B. Hayward.

THE complete history of American colonies would make interesting reading. They have been formed for a variety of purposes. Some have been based on a socialistic idea, others on philosophy, while almost every motive under the sun has been employed by the originators of these schemes, from the famous one in New England, made up of the best intellect of the day, to the one in the lower country, on the shores of Topolobampo Bay. California is the land of the colony; but these colonies are not based upon the idea of any one man, or any set of men,—are not difficult to understand. The idea can be presented in a nutshell. The State, with its varied climatic conditions, offers every inducement to the seeker after homes, where the people of the world can find cheap and productive lands that will support the tiller of the soil and his family. Those who speak from experience say that the searcher after a home can find pleasanter lines here with fewer inconveniences than in any land under the sun.

The inducements held out are those which interest every man who desires a home where his wife and children will have the greatest advantages at the least cost; where children will find the best educational facilities; where wives will find congenial companions, with the refinements of a suburban life. While California is well known the length and breadth of the American continent, in Europe, from which thousands of valuable citizens come every year, ideas regarding it and its condition are more or less crude.

California is an empire in itself, stretching along the Pacific Coast many degrees. It is a momentous question for a man of family in England, Germany, Sweden or Norway, this moving five or six or seven thousand miles, and naturally he wishes to know upon good authority what to expect. What chance have I to earn a living? What can I earn a year? Will the change be an improvement? What educational facilities are there for my children? Is the climate a healthful one? These are the questions which the would-be emigrant desires answered before he bids farewell to the home of his childhood. It is the object of the present paper to answer some of these questions, giving as an example one of the most thrifty and successful of the Californian colonies, one the soil of which has been tried and found rich and productive.

It is a difficult matter to tell a stranger how this State differs from the others. In some respects it is like Spain and Southern France; in some it is like England. The seasons are different from those in the East; they are two instead of four, melting into one another imperceptibly. The summer time is from July to October. During this period there is little or no rain; otherwise the country would not produce the fine raisins it does. Water is conducted through pipes and ditches, and when a farmer wants a rainstorm or a shower he steps into the yard and turns on the water. It is not a summer drought then, as water is plenty and for all purposes, and the yards are filled with flowers. The vineyards are now in leaf and the grapes swelling on the vines; the peach, apricot and other ordinary fruits are ripening. The newcomer will be astonished to see next to an apple tree a palm or pampas grass or some semi-tropic fruit, flower or plant. But this is one of the charms of the country: the plants of all zones meet here and thrive side by side. All through the summer there are no storms; there is little or no thunder,

In the Colony Vineyard.

clear, bright days being the rule. Hot days come as in all countries, but the summer nights are always cool, something which cannot be said in many cities of the East and Europe. The summer melts into winter, the days grow shorter, and by October it will cloud up some night, and rain will come, not in a deluge, not as might be implied by the term "rainy season," but just as it comes in the East.

From a Piazza near the Colony,—in Winter.

These rains come about once a week, giving for the season from twenty to forty inches of rain, as the case may be, amply sufficient for all purposes. The first answer to the rain is the coming of the flowers; like magic they appear, covering the entire land with a carpet like the Cloth of Gold of romance.

Can this be winter? the newcomer asks, as he looks down the famous San Joaquin Valley. Yes, this is the winter California offers: a winter where the flowers take the place of snowbanks in the lowlands; where barley is planted at Christmas time, and the song of birds fills the air. Snow there is, but on the crests of the distant Sierras that back the San Joaquin to the east, gleaming in the bright sunlight,—a magnificent and inspiring spectacle. It might be assumed by the proposed settler that such days with their evident mildness would be productive of enervation; but such is not the case. The winter days are cool, often crisp, so that a rousing fire is welcome to those who have to remain indoors. Yet it cannot be very cold, as through the window-pane you see the great roses nodding in the soft wind that finds its way over the Coast Range from the sea. To the invalid these conditions are a balm. California is the coming health resort of the world;

and there is not a town or hamlet from one end of the great State to the other but has some grateful invalid who rejoices in the fact that he came to the Golden State and recovered health.

The ambition of every true man should be to possess his own home; and

Schoolhouse at La Vina, John Brown Colony.

it can be said that no State in the Union affords better facilities for the homeseeker. The term colony might imply, to those not familiar with the conditions here, isolation and all the disagreeable features of the frontier life; but the opposite is true, nearly every modern town or city in the State being the result of an original colony.

Pasadena, the gem of the San Gabriel Valley, and generally designated as the "Crown of the Valley," is thirteen years old. It is one of the most beautiful places in the world, one of the richest cities in California, and began as the Indiana Colony. Riverside, Ontario and Pomona, which began in the same way, are now the seats of wealth, refinement and culture, are not ten years of age, and originated from the colony idea. The colony became a village, the village a town, the town a city, and in a few years thousands of people in the State have become rich; and scores of happy homes tell the story

of the success of colonies in California, where the homeseeker steps directly into a congenial community, and where all the elements of rough frontier life are wanting. As a rule the lands have been colonized in the following way: A number of families band together and buy land, plant it, each man suiting his own taste. Examples of this are found everywhere ; but another plan has been put in operation most successfully in the San Joaquin Valley, well illustrated by the John Brown Colony; that lies in one of the favored spots of the State, a short drive from the town of Madera, on the Southern Pacific Railroad, in Fresno County.

Nursery on John Brown Colony.

The plan of operation is that the purchasers, instead of buying the land to cultivate and improve at their own expense, only advance the money necessary to buy nursery stock and pay for the cultivation until the time it comes into bearing, the colony company doing all the work until such time, then taking its pay from the fruit sold.

As an example, the payments on a ten-acre tract would thus be $300 cash, $200 in one year, $200 in two years, and $200 in three years, all of which money is spent directly on the grounds.

The company now derives no benefit from these payments, and it is not until the vines or orchards yield $200 an acre that they receive any compensation for the land. This plan early identified the interests of the John Brown Company with those of the colonists, and was one of the best guarantees that the land would have the greatest cultivation possible.

While the price realized was two hundred dollars an acre, which is not at all high for good fruit land, the actual cash outlay of the buyer was only ninety dollars per acre, which he had three years to pay. Even that could not be called pay for the land, for it was spent on improvements, the land thus practically costing nothing.

A similar plan to this was first used in forming the Equitable Homestead Corporation, containing one thousand acres; and as soon as the proposition became known to the public there was a great demand for the land.

Ready for the Day's Work.

So successful was it, indeed, that the John Brown Colony No. 1, containing two thousand acres more, was formed, and sold at the rate of thirty acres per day.

The intention of the founders was that this should be all that was to be placed on the market; but when the originator arrived with an excursion of prospective purchasers from Chicago he found all had been sold, and

plant and cultivate the immense tract of land. The deferred payments bear eight per cent a year interest, and the company sell a large body of land much easier and quicker than they would in the old way for a good price. One of the best proofs of the feasibility of this plan lies in the fact that many similar schemes were floated on exactly the same plans and using almost the same words.

The Colony Hay Field.

was compelled to purchase a third tract of 1,920 acres, known as the Chapman Ranch, and named the John Brown Colony No. 2, to meet the ever-increasing demand, five hundred acres of which have already been sold.

The very novelty and fairness of the offer was what attracted such general attention and surprise, and made many think it a catch-penny device. No one concern could afford to invest the enormous amount of money required to

The purchaser had his property cultivated during the unfruitful stage when there were no returns, could work at whatever avocation he might be engaged in, earn his salary without anything to worry over, and at the end of the fourth year, or a little later, remove to his new home, with an income-bearing property sufficient to support a large family and leave a handsome surplus every year, free from all encumbrances, and with a certainty for the

future, provided he give it proper attention and care. His place, as well as the whole surrounding territory, was improving and increasing in value and beauty of appearance while he waited, and instead of having to pioneer it he could come to a home that was ready and waiting, with all the comforts of the most thickly settled districts at hand. What position could be more desirable?

had much to do in making a success of the colony; and Mr. J. R. Mitchell is the superintendent of the work. Behind the colony is the Bank of Madera and the well-known Pacific Bank of San Francisco, which has a cash capital of one million dollars and a surplus of nearly as much more.

Personal examination shows the ground to lie nearly as level as a floor, with a slope to the San Joaquin River

Down the Irrigating Ditch.

While it is not the intention to go far into details, yet this plan is so unique that it is well worthy of explanation.

A drive over this colony is particularly interesting and instructive as illustrating the methods pursued in cultivating new lands.

The chief manager is Mr. A. F. Johns, well known throughout Central California; Mr. Paul B. Hay, who now resides at Madera, is the agent, and has

to the west of six feet to the mile, giving a gradual pitch admirably suited for irrigating ditches and a proper outlet for the surplus water.

The soil on the Chapman Ranch is a rich, heavy, sandy loam, eight to ten feet deep, and, if anything, superior to the first tracts sold, being the very cream of all soils for the proper cultivation and success of a vineyard or orchard.

The scenery is fine and the climate exhilarating, the land being a smooth plain three hundred feet above sea-level, backed up by the snow-capped mountains of the Coast Range towards the west and the Sierra Nevadas on the east.

It must be always borne in mind that California is an extremely large State, taking in nearly *three* times as much territory as the State of New York, greatly diversified in character, and what is true of one section of the country is not of another. Many come to one part of the State, live there a while, and, should they be called to express an opinion, speak of that particular location as if it applied to the whole. The only way one can get any conception regarding the country is to visit all parts of it in every season of the year; and not until then is one competent to express an opinion. One can choose whatever kind of climate, scenery or soil suits him best, all within a very few miles.

To continue further on the John Brown Colony, thirty-five miles of irrigating ditches have been dug, the water being supplied from the Fresno River, and emptying into the San Joaquin. These ditches intersect all the different lots of the colony and give a bountiful supply of water, always insuring a good yield. The water right is given with the land.

Three thousand two hundred and sixty acres of those sold are planted to Muscat grapes, the choicest variety for drying and packing; the balance is laid out in orchards, forty acres in the Chapman Tract being planted in French prunes.

The colony company has reserved a tract containing forty acres for a nursery where it can raise the choicest stock for planting. So fine is the nursery stock considered that the Fresno nurserymen offered a large advance for its contents over the original cost. It is now valued at $11,000.*

So much has been said and known regarding the profits to be realized from the vine and tree that it is almost a repetition to say more; but the following table of what has been done by Messrs. Paige & Morton of Tulare County, just south of Fresno County, on their orchard of five hundred acres and vineyard of five hundred acres, is a fair and correct average estimate of the cost per acre of fruit-growing and its profits.

Kinds of Fruit.	Cost of planting and care first year per acre.	Cost of care and cultivation 2nd year per acre.	Age of trees or vines 1890.	Cost of cultivat'n and handling 1890 per acre.	Gross receipts of 1890 per acre.	Net profits 1890 per acre.
Apricots	$30	$20	5	$132	$343	$211
Nectarines	30	20	5	132	400	268
Peaches	30	20	5	150	500	350
Yellow Egg Plums	30	20	5	100	500	400
French Prunes	30	20	6	120	720	600
Pears	30	20	6	75	502	427
Raisins (1889)	30	15	5	65	305	240

It may be added that there has been an income from this fruit farm ever since the second year of its planting. The returns were of course small at first, but have been increasing steadily for three years, until the foregoing remarkable showing was made.

All this cannot be done without careful and constant attention; but if the colonist uses his brains as well as his hands there is no reason why he should not obtain results equally as good. The large profits realized by the California fruit-growers make a ten or twenty acre lot equal to a farm containing a quarter section that is laid out to grain in the Eastern States.

It is an established fact, proven by the past, that three-year-old vines will produce three tons of grapes per acre, which makes one ton of raisins, and

*The stock embraces such trees as peaches, apricots, French prunes of several varieties, Muscat grape cuttings, fig trees, about four thousand umbrella trees, one thousand of which are ready for planting, and about one thousand Italian cypress for hedges, and many varieties of flowers.

Town of La Vina on John Brown Colony.

which, marketed in one of the Fresno packing-houses loose in the sweatbox, without packing, will bring five cents a pound or one hundred dollars. If they are packed the prices run about two hundred dollars per ton, and when the vines are six years old the yield will be six tons of grapes to the acre, equal to two tons of raisins, or double the amount at three years.

Professor Gustav Eisen, the highest authority on grape culture in California, says: "I know of vines which only three years from planting yielded this year over one hundred dollars per acre net, $2,900 having been taken from twenty acres of vines."

Orchards yield even larger returns, but the majority of trees do not bear as soon as the vine. Olives are probably one of the best paying fruits; but as they do not come into bearing for seven years there are not more planted. A good way to do is to plant an olive orchard, with vines between the trees. The vines bear in three years, and when the quarters become too cramped for the orchard and vineyard, and the former is in bearing, the vines can be rooted out.

In 1874 California shipped East two hundred pounds of raisins. In 1888 she shipped eighteen million pounds, and the extent to which she failed to supply the home market is fully illustrated by the report of the Finance Committee, already quoted, wherein it is declared that there was actually imported into the United States in the year 1889, 34,393,500 pounds of raisins. When, therefore, California has trebled its present product of raisins it will barely equal the importation, so there need be no fear of overproduction.

The secret of success lies in careful attention, proper pruning and cultivating, selecting best raisins for packing in boxes and selling balance in sacks for what they bring. Attractive and unique packing makes a great difference in price received.

To-day all but six hundred acres of those sold are planted and showing a vigorous growth; and these will be planted this winter.

In the John Brown Colony No. 2 two fine avenues one hundred feet wide are laid off to be planted in ornamental trees and shrubbery. One is a mile and the other a mile and a half long.

Camps are established at different points containing comfortable buildings for the workmen, the majority of whom are colonists who have already come from the East, and are paid $30 per month and board by the company, what they earn going towards paying for their lots.

At Colony No. 1 there is already a town known as La Vina, now a year old, which contains thirty houses and in the neighborhood of two hundred inhabitants. A fine public school, that cost $6,000, is erected; it is two stories high, and contains four classrooms; it now has fifty-two scholars and two teachers.

On Colony No. 2 is the Chapman Home, consisting of twenty acres of the same class of land as in the colony, which is under a high state of cultivation, and gives its owners a handsome income.

All is not work to the dwellers in this colony. Not far away the mighty Sierra Nevadas raise their white caps, from which innumerable cañons reach down to the lowland, affording a large number of resorts during the summer. There are cool glens, mighty forests, large game in abundance, and all the degrees of altitude one might wish.

A day's travel, less than one hundred miles distant, is the famous Yosemite, the most remarkable scenic region in the world, a region that is thronged every season with tourists from all over the world. There are then not alone the material comforts here, but for this region Nature seems to have excelled herself.

HUNTING THE ANTELOPE.

By Charles Frederick Holder.

WE were coming down the slope of the Sierra Madre, the desert beyond Antelope Valley ranging away to illimitable distance with here and there a strangely shaped peak, a miniature volcano or a picturesque minaret breaking the horizon. The sun was on the wane and a marvelous transformation scene taking place. The buttes, slopes and plain that a few moments before had been deluged with the blazing sunlight were now assuming a vivid pink that seemed to suffuse the very air, and the peaks of the distant Sierras glowed with color. As the sun went down the shadows deepened, the lowlands changed from pink to violet and purple, the varying shades creeping up the heights, slowly encompassing every rock and cliff, and growing in intensity until every peak was set in a royal hue. It was the glory of the setting sun; like living things the shadows seemed to creep out of the cañons and arroyos. The purples took on darker tints, until finally the sun sank beneath the western mountains; and the chill of night settled down upon the weird scene,—the gateway of the great American desert.

"Quite in the way of a transformation scene," remarked my companion in the little smoking-room of the sleeper. "Quite," I replied. "The last time I came down this grade," he continued, "I followed almost this same trail. I passed the same old yuccas with their beckoning arms, their horrible distortions. I remember the same glow on the mountain; and pardon me, but has such a scene as we have just witnessed any especial effect upon you?" he asked.

"Well, yes," I answered, "I fancy it has; at least I feel like taking off my hat." "Exactly," said my companion, "and I may say what I was about to without exciting your mirth. I rode through here nearly forty years ago on horseback; a man who had never given a thought to other than material things, and just such a scene as we have witnessed to-night, warmed up my spiritual nature so that I never after doubted the design in nature. I had a most singular experience on the edge of the desert here, which comes back to me as if yesterday. I was overtaken by the darkness, and fully expected to lie down beneath the stars, when I saw a light twinkling, then another, and I turned my horse in that direction. You know how very deceptive distances are on the desert, and it was fully five miles before I came into the camp. It was a party of a dozen, representing three families, prospecting for land in three comfortable prairie-schooners. They gave me a hearty welcome, and I was soon sitting around a blazing fire eating a hot supper, and giving an account of myself. It did not take me long to find out that there was a romance in the air. One of the party was a remarkably attractive young girl; and two young men, strapping fine fellows, paid her assiduous attention. The following morning the two young men came to me and said that as I was a stranger they wanted me to arbitrate a question between them. 'You see,' said one, 'we are the best of friends, but we both love the same girl. She shows no preference, but we each think the other ought to pull out and give the other a chance; and we would like

you to suggest some way out of the difficulty.' They were both finely built fellows,—equals in every way. I was amused and puzzled, and while I looked off over the sage-brush in search of an idea my eyes rested upon a band of antelopes—prong-horns—evidently feeding some distance away. The sight brought to my mind a sport I had once tried in Africa, that of hamstringing an antelope from the horse with the famous Hamran Arabs, and turning to the young men I said, 'If I had two swords or sabres I would suggest something.' 'I have the sabres, but I would not raise my hand against Tom,' said one, clapping his friend on the shoulder in a manly fashion. 'I do not mean a duel,' I replied with a laugh. 'What then?' asked the other, 'for we have four old sabres to sell to Indians.' 'This,' I explained; 'over yonder there is a band of antelopes; they run like the wind, and the rider who comes up with one over this desert is a man.' 'But I can do it,' said one of the men. 'I'll risk my horse for it,' retorted the other with a smile. 'He'd outrun any antelope on earth.' 'But that is not what I mean,' I interjected. 'In Africa, especially in the north, there is a tribe of sword-hunters among the Arabs; they are the finest riders in the world, and bring down their game with sabres or rather swords of marvelous sharpness. Their plan is to ride up to their game at full speed, and when alongside cut the hamstring and so take the game. It requires a good rider, a perfect eye and nerve. Now, I propose that you sharpen up your sabres, mount and run down the herd, and the one who gets his first antelope by severing the tendon achilles shall have the field in love.' 'Good,' said the men, and they shook hands over the compact; and both were soon sharpening up the old sabres with some scythe sharpeners one of the party happened to have. This done, the horses were saddled, and accompanied by all the men of the party we rode in the direction of the prong-horns. They insisted that, as I suggested the plan, I should be the judge; so I cinched my horse with especial care, and began to feel some of the old fire creeping through my veins. While now antelopes are rare, and there is probably not one within fifty miles of us, they were very common thirty years ago, and not at all wild, so that we easily got within an eighth of a mile of them before they started. The leader looked at us a moment, then trotted down into a little wash, followed by the entire band of about twenty. As soon as they disappeared we started in, and by taking a turn we came upon them just as they were coming out of the wash. They were not fifty yards away, and what a shot! They looked at us in a startled, curious way for a single second, and were away. They ran like arrows shot from the bow, and as straight, leaving us at the start as if we had been standing still, while a cloud of fine white dust rose between us, from which shot small stones and pebbles, picked up by the sharp little hoofs of the prong-horns. The antelopes gained on us for the first half mile; then we began to creep up on them. They were now turning gradually, making a sweep or curve. The pace was terrific, and more than once I shut my eyes, not wishing to see my own neck broken. The desert was cut with gullies made by the winter rains; here were heaps of bowlders or stones, piled up by the water, now patches of sage-brush concealing holes and burrows; but nothing stopped us, and the gamy horses kept on gaining slowly, evidently as mad with excitement as the riders. My own horse was a thoroughbred, and I doubt if I could have stopped him; he took everything as it came, was a magnificent jumper, and now carried me well abreast of the two young men who, with their swords across the saddle, were urging their ponies at the top of their speed. I fancied one horse was slightly troubled by the pace, as any horse might have been on a smooth track; but

Hunting the Antelope with the Sabre.

slowly we pulled up on the little animals, who had now reached a hard, sun-baked stretch, and were making a turn which would bring them almost back to the original starting point. The pace was telling on them without doubt; we were now fairly within reach, and while I drew off to the left, slightly ahead, the two young men with a shout dashed with uplifted sabres down among the devoted animals. A shout, a roar of feet, a cloud of dust, and out of it came both men chasing the same fleet little antelope. I saw in a moment who had lost. The man on the right side was at a disadvantage, as he would have to make a cut over his horse,—similar to the old left cut against cavalry, used in the service. He saw this himself, evidently, as, plunging the spurs into his horse, he shot ahead of the antelope a few feet, then leaning back and turning directly in the saddle, showing his skill to fine advantage, he struck, but missed; and the pony, startled at the blow, turned, leaving him virtually out of the race. The other had the game in his own hands, and a magnificent sight it was. We were almost side by side, and keeping his pony well in hand he leaned over and with a fine sweeping blow cut the little animal down. Yes, the girl married him, and it was just as the story books have it,—they were happy forever after, as I often see them in their home in this county."

The antelope which in former years was so common in western North America is now a rarity, and despite the strict game laws of California will undoubtedly soon be a thing of the past. The hunting-grounds now include the great level plain of the southern San Joaquin Valley from Mojave east to the desert proper and up to Tulare. They are found on both sides of the Sierra Madre Range, reaching down into Mexico, where they can be shot and followed without fear of game laws. From the eastern summit of the Sierra Madre one looks down on what now may be called the antelope country. From the slopes of San Antonio the eye rests upon one of the most remarkable panoramas in the world. To the east stretches a desert,—a region of heat, desolation and death. Dried-up lakes, vistas of sand, weird vegetation, ridges of sand and stone,—a region where the summer days are like a furnace and where a winter chill settles in at night. A turn of the head and the eye rests on the garden spot of the world. The fertile valleys and orange groves of Southern California, the cities of San Diego, Los Angeles and other counties with their wealth of verdure, their suggestions of perennial summer; while beyond, in deep-blue setting, is the ocean and its isles of romance.

Leading up from the desert are numerous cañons, rivers of green that wind away into the range, forming here and there valleys and pastures, nooks and corners of verdure, presenting sharp contrasts to the bleak and uninviting region so near at hand. Here the live-oak, sycamore, the fragrant bay tree and others thrive; and beneath their branches at certain times of the year the wary antelope is found, though it is more at home on the burning sands that border the desert. In descending from the upper peak, eleven thousand feet above the Pacific, the sportsman may meet the grizzly, the black bear, the big-horn, the black-tailed deer, coming upon the antelope on the lower levels. Sometimes it can be stalked, but the true sportsman will take to his horse, which has been tethered in some pasture of the cañon, and with a final cinch sally out to give the antelope fair play and a chance for its life. Often the little animals are seen at the entrance of some green cañon, and the horses come upon them suddenly; then it is every man for himself. They give a startled look, wheel on their delicate pivots and are away. Your horse has caught the infection, and you feel the expansion of his lungs against your legs; and then,—well, if you have experienced

the joys of the steeple chase, have followed a good pack of joyous-throated hounds or have done your duty behind the stag-hounds, then you know something about it. The world looks bright to you. The blood goes jingling madly through your veins. The very air cuts your face. At the pace you expect to break your neck, but what of it? Your horse has taken the matter in hand, and the bit is a fixture between his teeth. The reins are over the pommel, and you are vainly trying to take aim over your pony's ears at the bunches of brown and dun flashing like streaks of light ahead.

"Don't shoot," shouts an old and cooler head; "ride up alongside and make a sure thing of it."

The little animals run in a circle as a rule,—an intuition obtained from some forefather who understood a trick or two, perhaps, in avoiding capture. You are fairly mad with excitement. The wind kisses, beats and caresses your face all in a moment; you are in an ecstasy of delight, your one thought to beat the rest. You appear drawn on by a whirlwind of legs, dust and fleeting forms, yet occasionally your neck is thought of. The level ground where the sage grows is passed, and your pony suddenly comes to a wash. You cannot see bottom, but the other side is fairly within a possibility you have read of; and with a shout of bravado you are in the air, a little ashamed, as your horse has put back his ears, resenting the doubt that he has felt by that mysterious current that runs down the rider's legs and tells the horse all about it. After that you throw doubts to the wind and take everything as a matter of course, learning that this sturdy horse, who appears to be running away, is a very knowing fellow, and will attempt nothing that he cannot make a success of. The antelopes have turned, you take a short cut to the left, and after a mighty effort the horse brings you flying alongside the little creatures. There are six of them, and how they run,—speed of jack rabbits and greyhounds all bowled into one, flying over the surface, with heads stretched out and slender limbs working like the springs of some machine. To kill such a gamy little creature seems hardly the thing; and you ride along at this killing pace, fairly gloating over them, all the old inherited hunting instinct aroused, mercy and savagery fighting for the supremacy, and the latter wins. It is two or three hundred miles to a good market, and dinner is an important item; so down goes the antelope. If you had doubts of being a good shot before you have none now, as on the dead run you manage to put a bullet where it was intended, and the little creature plunges high into the air and falls dead beneath your very feet. Your pony rounds up on the instant, possibly imagining that he is on the other end of a rope or lariat; and you tumble off, stiff and breathless, to claim your trophy, while the others sweep on in the wild race, disappearing in the cloud of dust. This is the sportsmanlike method of taking the antelope, sharing with it the dangers and chances of the chase. The little creature can be stalked, often falling a victim to its curiosity, being held in place by singular motions on the part of the hunter.

There is every reason for the protection and preservation of this little creature. It is the sole representative of the antelope tribe in America, and is the equal of many of the African forms in speed, beauty and grace. It is best known as the prong-horn, from the singular prong on its horns. Another name for it is prong-buck, while to exact science it is *Antilocapra Americana*. The antelope is remarkable as being the only one of the hollow-horned ruminants possessing undivided horns. Equally singular is the fact that the horny sheaths or horns are cast every October or November. The casting is produced apparently by the development of what are termed casting hairs, which grow in a skin which forms beneath the horns, the old horns being seemingly pushed off.

A full-grown male antelope stands about seven feet eight inches at the withers, and six inches more at the rump. Its length should be about five feet. The marking is more or less protective, especially when observed from behind. The general color is yellowish brown in the back and upper portions, with white below. The buttocks are pure white, so that often when an antelope is standing

Antelope Killing a Rattlesnake.

side on, and suddenly turns and runs, it almost seems to disappear. The eyes of the antelope are striking organs, being large and lustrous, often having an almost human expression. They are placed directly beneath the horns in the male, occupying a most extraordinary position. The little animal is a type of grace and activity; its limbs are long, slender and delicate, terminating in sharp, knife-like hoofs,

that are often used as weapons, especially when the antelope meets a rattlesnake. At such a time the little animals are much excited, and the one possessed of the most courage possibly will undertake the act of executioner. This it accomplishes by leaping into the air, bringing its hoofs together in a point so that they come down upon the coiled serpent, cutting and lacerating it so that but a few bounds

of this kind result in the reptile's death. The range of the prong-horn, properly speaking, is wider than we have given. It may be said to roam from the Missouri River to the Pacific, and from about 53 degrees north latitude into Mexico, though the larger number are still found and confined to the borders of the Arizona desert, where, it is hoped, it will long find a home and a protection.

THE VOYAGE OF CABRILLO.

(Commenced in January number.)

[Some years ago a collection of papers was found in one of the libraries of Madrid that proved to be the diary of the discoveries of Cabrillo kept by his pilot Ferrel, in the famous voyage along the California coast in 1542, in which the natives of California were first seen and described by white men. The book was translated for this Government by Mr. Richard Stuart Evans, the title of the volume being, "Coleccion de various documentos, para la historia de la Florida y tierras adyacentes (Tomo I.), en la casa de Trübner y Compañia, Núm.— Paternoster Row, Londres." The following is the literal translation as given in the report of the geographical survey, and is of great interest, as it mentions and describes many of the locations, as Santa Barbara, San Diego and others that are now flourishing American cities, which then were the homes of unnumbered tribes.]

Wednesday, at midnight, on the 1st day of November, standing off, a heavy wind from the north-northwest struck them, which did not let them carry a palm of sail, and by the dawn of day freshened so much that they could do no less than seek shelter, and they took shelter under Cabo de Galera, and anchored there and went on shore; and because there was a large town which they call Xexo, and wood did not appear to be very much at hand, they agreed to go to Pueblo de las Sardinas [Goletta Anchorage], because there water and wood were very near and accessible. They called this harbor of Galera Puerto de Todos Santos [Coxo Anchorage]. The following Thursday they went to Pueblo de las Sardinas, where they were taking in water and wood three days; and the natives of the country aided them and brought wood and water to the ships. This village of the Puerto de Sardinas is called Cicacut, and the others, which are from that place to Cabo de Galera, are, Ciucut, Anacot, Maquinanoa, Paltatre, Anacoat, Olesino, Caacat, Paltocac, Tocane, Opia, Opistopia, Nocos, Yutum, Quiman, Micoma, Garomisopona. An old Indian woman is princess of these villages, who came to the ships and slept two nights in the captain's ship, and the same did many Indians. The village of Ciucut appeared to be the capital of the other villages, as they came there from other villages at the call of that princess; the village which is at the cape is called Xexo. From this port to Pueblo de las Canoas there is another province which they call Xucu. They have their houses round and covered very well down to the ground; they go covered with skins of many kinds of animals; they eat oak-acorns, and a grain which is as large as maize, and is white, of which they make dumplings; it is good food. They say that inland there is much maize, and that men like us are traveling there. This port is in 35⅔ degrees.

Monday, the 6th of the said month of November, they departed from the said port of Sardinas; and that day they made hardly any progress, and until the following Friday they held on with very little wind. This day we reached Cabo de Galera; through all this course they could not avail themselves of Indians, who came to board them with water and fish and showed much good disposition. They have in their villages their large public squares, and they have an inclosure like a circle, and around the inclosure they have many blocks of stone fastened in the ground, which issue about three palms, and in the middle of the inclosures they have many sticks of timber driven into the ground like masts, and very thick; and they have many pictures on these same posts, and we believe that they worship them, for when they dance they go dancing around the inclosure.

The Saturday following, the day of San Martin, on the 11th day of the said month of November, they proceeded, sailing along the land, and they found themselves this morning 12 leagues from the cape, in the same place where they arrived first [*i.e.*, off San Luis Obispo]; and all this day they had a good wind, so that they sailed along a coast running northwest and southeast full 20 leagues; all this coast which they passed this day is a bold coast without any harbor, and there extends a chain (cordillera) of sierras along the whole of it, very lofty, and it is as high by the sea as on the land within; the sea beats upon it [this description applies exactly to the coast between Cape Saint Martin and Point Sur]. They saw no population nor smokes; and all the coast, which has no shelter on the north, is uninhabited. They named the sierras Las Sierras de San Martin; they are in 37½ degrees. The spurs of these and of the sierras on the northwest form a cape which projects into the sea in 38 degrees; they named it Cabo de Martin [Point Sur]. This same night of Saturday, at four o'clock in the night, being in the sea about 6 leagues from the coast, lying by waiting for the day, with a southeast wind, so great a storm struck them from the southwest and the south-southwest, with rain and dark, cloudy weather, that they could not keep up a handbreadth of sail, and it made them run with a small foresail, with much labor all the night; and the Sunday following the tempest fell upon them with much greater violence, which continued that day and night until the following Monday at noon, and the storm was as great as can be experienced in Spain. On Saturday night they lost sight of their consort.

Monday, the 13th day of the said month of November, at the hour of vespers, the weather cleared up and the wind veered to the west, and immediately they put on sail and went in search of their consort at the turn of the land, praying to God that they might discover her, as they much feared that she would be lost. They were running to the north and to the north-northwest with the wind west and west-northwest; and the following Tuesday at daybreak they had sight of the land, and they were able to hold on until the evening; and they could see that the land was very high, and they cruised along the coast to see if there was any port where they might take shelter; and so great was the swell of the sea that it was fearful to behold; and the coast was bold and the sierras very lofty, and at evening they lay by at anchor; it is a coast running from northwest to southeast; they perceived the land at a point which projects into the sea which forms a cape, and the point is covered with trees, and is in 40 degrees [Point de Arenas].

Wednesday, the fifteenth of the said month, they had sight of their consort, for which they gave many thanks to God, as they considered her lost; and they came up with her and joined her at evening. They of the other ship endured more danger and risk than those of the captain's vessel, on account of its being small and having no deck. This land where they were sailing is to appearance very good, but they saw no Indians nor smokes. There are grand sierras covered with snow; there are many trees. At night they lowered the sails and lay by.

On the following Thursday, the 16th of the said month of November, at daybreak, they were upon a large inlet [Bodega Bay?], which came from a turn of the shore, which appeared to have a port and a river; and they went beating about this day and the night and the Friday following, until they saw that there was no river nor any harbor; and to take possession they cast anchor in 45 fathoms. They did not dare to land on account of the high sea. This creek is in a little over 39 degrees, and it is all covered with pines to the sea. They gave it the name of La Bahia de los Pinos

[Bodega Bay]. The following night they lay by until the next day.

The following Saturday they were running along the coast, and they found themselves at night off El Cabo de San Martin. All the coast they passed from this day is very bold, and there is a great swell of the sea, and the land is very lofty; there are mountains which rise to the sky and the sea beats upon them. While sailing near the land it appears as if they would fall upon the ships; they are covered with snow to the summit. They gave them the name of Las Sierras Nevadas [the Sierra Nevada thus christened]; and the principal one forms a cape, which projects into the sea, which they named Cabo de Nieve [not identifiable]. The coast runs north-northwest and south-southeast. It does not appear that Indians inhabit this coast. This Cabo de Nieve is in 38⅔ degrees, and always when it blew from the northwest it made the weather fair and clear.

Thursday, on the twenty-third day of the month, they approached on a backward course the islands of San Lucas [the group collectively here meant], and one of them named La Posesion [San Miguel]; and they ran along all the coast, point by point, from El Cabo de Pinos to them, and they found no harbor, so that of necessity they had to return to the said island, on account of having these days a very high west-northwest wind, and the swell of the sea was very great. From Cabo de Martin to Cabo de Pinos we saw no Indians, because of the coast's being bold and without harbor and rugged; and on the southeast side of Cabo de Martin for 15 leagues they found the country inhabited, and many smokes, for the land is good; but from El Cabo de Martin as far as to 40 degrees we saw no sign of Indians. El Cabo de San Martin is in 37½ degrees.

While wintering in this Isla de Posesion [San Miguel], on the third day of January, 1543, departed from this present life Juan Rodriguez Cabrillo, captain of the said ships, from a fall which he had on the same island at the former time when they were there, by which he broke an arm near the shoulder. He left for captain the chief pilot, who was one Bartolome Ferrel, a native of the Levant; and he charged them much at the time of his death that they should not give up the discovery, as far as possible, of all that coast. They named the island La Isla de Juan Rodriguez. The Indians call this island Liquimuymu, and another they called Nicalque, and the other they call Limu. In this island De la Posesion there are two villages; the one is called Zaco and the other Nimollollo. On one of the other islands there are three villages; one they call Nichochi, and another Coycoy, and the other Estocoloco. On the other island there are eight villages, which are, Miquesesquelua, Poele, Pisqueno, Pualnacatup, Patiquiu, Patiquilid, Ninumu, Muoc, Pilidquay, Lilibeque.

The Indians of these islands are very poor. They are fishermen; they eat nothing but fish; they sleep on the ground: all their business and employment is to fish. In each house they say there are fifty souls. They live very swinishly; they go naked. They were in these islands from the 23d of November to the 19th of January. In all this time, which was almost two months, there were very hard wintry storms on the land and sea. The winds which prevailed most were west-southwest and south-southwest and west-northwest. The weather was very tempestuous.

Friday, the 19th day of the month of January, 1543, they set sail from the island of Juan Rodriguez, which is called Liquimuymu by the natives [San Miguel], to go to the mainland in quest of some supplies of provisions for their voyage; and in leaving the port a heavy storm from the west-northwest struck them, which made them put into the other island of San Lucas, and they anchored off the island of Limu, to which they gave

the name of San Salvador [Santa Cruz]; and they found it necessary to weigh anchor again because it had no port more under the shelter of the islands, and the wind veered round obliquely, and they sailed round these islands eight days with the winds very foul, sheltering themselves by the islands from the bad weather; and on the twenty-seventh day of the said month they entered the same port of the island of Juan Rodriguez where they were before. The greatest obstacle they had was because the winds were not fixed, but went veering about from one to another. Those which are most constant are from the west-northwest and from the west-southwest.

Tuesday, the 29th day of the said month of January, they departed from the island of Juan Rodriguez [San Miguel] for the island of San Lucas [Santa Rosa here intended; although the confusion resulting from the Spaniards having named and renamed certain ones of the group renders it difficult to fix them with precision], which is in the middle of the others, to take up certain anchors which they had left in a storm, not being able to raise them, which they took, and took in water.

They departed from this island of San Lucas Monday, the 12th day of the month of February, which they could not do sooner on account of the bad weather, which gave them winds and much snow. It is inhabited, and the people are like those of the other island. The Indians call it Nicalque. There are three villages in it, which are called Nicochi, Coycoy, Coloco. This day they went to Puerto de las Sardinas [Goletta Anchorage], to take in wood and other things necessary for their voyage, as they were not to be obtained on those islands.

Wednesday, the fourteenth day of the said month, they departed from El Puerto de Sardinas, having taken a boat-load of wood, and they did not dare to remain longer there on account of the great swell of the sea; they did not find so many Indians as before, nor any fishing on account of the winter; the natives eat oak-acorns and other seeds and herbs of the field without cooking. From this place they proceeded to the island of San Salvador [Santa Cruz], because they were there more secure from the storms, that they might be able to make sail and run along by the sea.

Sunday, the 18th day of the said month of February, they departed from the island of San Salvador with a moderate wind to the northeast, and they ran along to the southwest because they were told that there were other islands toward the southwest; they were at dusk this day about 12 leagues from the island of San Salvador, and they saw six islands, some large and others small. [The southern members of the Santa Barbara group, of which there are actually but five; but Santa Catalina has the appearance of being cut in two]. This day a sailor died; and the following Monday, at daybreak, they were at sea about 10 leagues to the windward of the islands, and with the wind west-northwest they were standing off five days to the southwest, and after they had proceeded about a hundred leagues they found the wind more violent and the sea high; and Thursday, the 22d day of the said month of February, they again stood in-shore to endeavor to reach Cabo de Pinos [Point de Arenas], with the wind south-southeast, which continued three days, and was increasing each day; and the Sunday following, at daybreak, they gained sight of Cabo de Pinos; and they were this day at dusk 20 leagues to windward on a coast running northwest and southeast, and it is bold and without harbor; there was no smoke seen on the land, and they saw a point which formed the extremity of the land which turned the coast to the northwest. In the middle of the night the wind suddenly shifted to the south-southwest, and they ran to the west-northwest until day, and in the morning the wind shifted to the west-southwest

with great violence, which held on until the following Tuesday; they ran to the northwest.

Tuesday, the twenty-seventh day of the said month, the wind veered to the south-southwest, which held on all day; they ran to the west-northwest with the foresails lowered, for it blew violently; at the approach of night the wind shifted to the west; they ran all night to the south with but few sails; there was a high sea which washed over them.

The Wednesday following, the twenty-eighth day of the said month, at daybreak, the wind shifted directly to the southwest, and it did not blow hard. This day they took the latitude in 43 degrees. [Allowing the necessary error of a degree and a half, this would place the ships somewhat above Cape Mendocino.] Towards night the wind freshened and shifted to the south-southwest. They ran this night to the west-northwest with much difficulty, and Thursday at daybreak the wind shifted to the southwest with great fury, and the seas came from many parts, which harassed them much, and broke over the ships, which not having decks, if God should not succor them, they could not escape; and not being able to lay by, of necessity they ran aft northeast towards the land; and now holding themselves for lost they commended themselves to our Lady of Guadalupe, and made their wills, and ran thus until three o'clock in the afternoon with much fear and labor, for they saw that they were going to be lost, and already saw many signs of the land which was near, as small birds, and logs very fresh, which floated from some rivers, although from the dark and cloudy weather the land did not appear. At this hour the Mother of God succored them with the grace of her Son, and there came a violent rainstorm from the north, which made them run all that night and the following day until sunset to the south with the foresails lowered; and because there was a high sea from the south it broke over them each time by the prow, and passed over them as if over a rock, and the wind shifted to the northwest and the north-northwest with great fury, so that it made them run until Saturday, the 3d of March, to the southeast and to the east-southeast, with such a high sea that it made them cry out without reserve that if God and his blessed Mother did not miraculously save them they could not escape. Saturday at noon the wind moderated and remained at the northwest, for which they gave many thanks to our Lord. They suffered also in provisions, as they had only biscuit, and that damaged.

It appeared to them that there was a very large river of which they had much indication between 41 degrees and 43, for they saw many signs of it. [Probaby the drift from the Columbia was here noticed, although all the smaller rivers of this coast carry down more or less driftwood.] This day, in the evening, they recognized Cabo de Pinos [Point Arenas], and on account of the high sea which prevailed they could do no less than run along the coast on the return course in search of a port. They experienced much cold.

Monday, on the 5th day of the said month of March, 1543, at dawn, they found themselves off the island of Juan Rodriguez [San Miguel], and they did not dare to enter the port on account of the great storm which prevailed, which dashed the sea on the entrance of the port in 15 fathoms; the wind was north-northwest; the entrance is narrow; they ran into the harbor of the island of San Salvador [Santa Cruz] on the southeast side; and the night before coming with a violent tempest, with only two small foresails, the other ship disappeared so that they suspected that the sea had swallowed it up, and they could not discover it any more, even after daybreak; they believe they must have been in 44 degrees when the last storm took them and compelled them to fall off to leeward. [The allowance of a degree and a half would place

the highest point reached in about 42½ degrees, or at about the southern border of Oregon, and it is believed that this is not far out of the way.]

Thursday, the eighth day of the said month, they departed from the island of San Salvador, to stand in for the mainland in search of the other ship, and they proceeded to Pueblo de las Canoas [Buenaventura] and did not obtain news of the other ship; and here they took four Indians.

The Friday following, on the ninth of the said month, they departed from Pueblo de las Canoas and proceeded to the island of San Salvador and found no signs of their consort.

Sunday, the eleventh of the said month, they came near Puerto de San Miguel [Saint Pedro Bay]; neither did they find here their consort nor any news of her; here they waited six days; here they took two boys to carry to New Spain for interpreters, and left certain signals in case the other ship should approach.

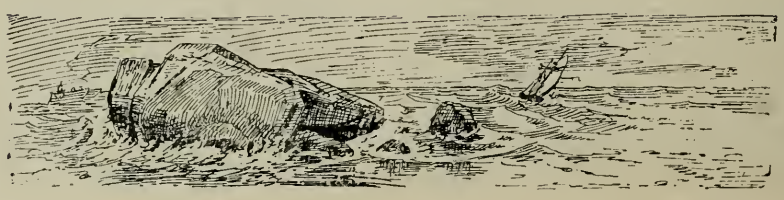
Saturday, the seventeenth day of the said month, they departed from the said Puerto de San Miguel; the following Sunday they arrived off Bahia de San Mateo [San Diego Bay] and found no more signs of the other ship.

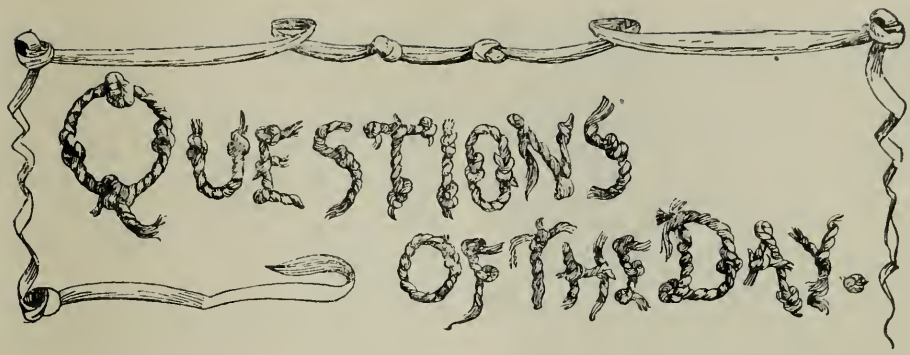
Sunday, the eighteenth day of the said month, in the evening, they departed from this bay of San Mateo, and the Wednesday following, on the twenty-first of the said month, they arrived at Puerto de la Posesion [Port St. Quentin], and still obtained no news of their consort; they waited two days without entering the port, for they did not dare to enter it on account of the heavy northwest wind which blew, and, as it broke their cable, of necessity they weighed anchor.

Friday, on the twenty-third day of the said month, they departed from Puerto de la Posesion, and the following Saturday at midnight they arrived off Isla de Cedros [Cerros Island], and being there the following Monday, the twenty-sixth day of the said month, arrived the other ship off Isla de Cedros, at which they rejoiced much and gave many thanks to God; this ship put into La Isla de Juan Rodriguez [San Miguel], by night, passing over some breakers so that they expected to be lost, and the mariners promised to go in procession naked to her church, and our Lady delivered them.

On Monday, the 2d day of the month of April, they departed from Isla de Cedros on their return to New Spain, because they did not have a supply of provisions to renew their attempt to discover the coast. They arrived in El Puerto de Navidad Saturday, the 14th day of the said month of April.

Came as captain of the ships, Bartolome Ferrel, chief pilot of the said ships, in default of Juan Rodriguez Cabrillo, who died in Isla de la Posesion [San Miguel]. The men came in the said ships.





THE people with general and the politicians with special interest will, for the next six months or more, watch the proceedings of Congress. The action of the Fifty-first Congress may be taken as the definite policy of the Republican Party upon the tariff question, and it remains to be seen whether the policy of the Democratic majority in the present House will be in accord with that indicated in the Mills bill of the Fiftieth Congress. The Mills bill and the principles embodied afterwards in the McKinley bill constituted the issue in the election of 1888. Having been worsted in that election the query is, Will the Democrats adhere to the principles of the Mills bill, or will they recede from it and plant themselves upon a less rugged issue?

The election of Mr. Crisp, of Georgia, to the speakership is accredited to the influence of Governor Hill, and is regarded as unfriendly to the pretensions of Mr. Cleveland. There seems little doubt that Governor Hill is not in accord with Messrs. Cleveland, Carlisle, Mills, Morrison and others upon the tariff question. In a public speech in 1888 he said if he thought the Chicago platform committed his party to free trade he would not support it, and within a year he replied to an invitation to a free trade banquet in language of decisive disapproval of that sentiment. The element of the party which adhered to the views of Mr. Randall in the House of Representatives is friendly to Governor Hill. Mr. Springer, the newly appointed chairman of ways and means, though he supported the Morrison bill of the Forty-ninth Congress, and the Mills bill of the Fiftieth Congress, and who has always been regarded as an extreme partisan, in a recent interview expressed himself in opposition to a general revision of the tariff, and in favor of a few itemized modifications. The prospect therefore is, that the Democrats will not lay out a program, but will substantially have the issue in the next presidential campaign upon the McKinley law. The few modifications suggested will be urged so that it cannot be said that the party assents to the Republican policy. It is also obvious that the changes proposed are for the purpose of influencing the New England vote; for they are particularly favorable to the interests of that section of the nation. Free wool is much wanted by the New England manufacturers, though it would be disastrous to the wool-producing States.

The political game will be played with "a fine Italian hand." The issue of the impending campaign is almost certain to be upon economic questions. The change of attitude by the Democrats from that of broad revision to one of comparatively trifling modification will be regarded by the country as a pretty square backdown, and it may be followed by disastrous results. The question of free silver coinage will cut some figure; and it seems inevitable that the Democrats in the main will be forced to sustain the measure. Such action will tend to counteract the effect of the proposed tariff modification, in New England. There are no indications as to what the Democrats will attempt to do on the measures of the last Congress for stimulating the building up of a merchant marine. There seems to be little doubt that the Democrats are divided into Hillites and Clevelandites upon questions of public and party policies. Hill has the advantage, for he is a practical politician and Cleveland is a theorist and doctrinaire.

As soon as the material needs of man are satisfied he begins to feel a restless desire to create environments about himself that shall be an expression of his spiritual nature.

Here in the new West, where the pioneer labor was opening up the resources of a rich but totally undeveloped and remote section of country, the struggle has been thus far simply to acquire wealth to gratify material needs, and to provide in many cases for a possible future of ease and luxury in some more civilized and populous center of activity. It is only within a

few years that a permanent population has taken root here; it is only within a few years that the rough-board shanty has been superseded by the comfortable frame dwelling or the stone and brick villa; it is only within a few years that settlers have opened their eyes to the positive disadvantages of rough roads cut across fields and along river banks, with no protection against winter washouts or summer dust-storms; it is only within recent years that one finds shrubs and vines about the farmhouses, trees along the roadsides, hedges to protect vineyards and orchards from dust, reservoirs for conserving the superabundance of winter moisture for the protection against summer drought, reading-rooms in small towns for the restless young people, King's Daughter and Chautauqua circles even in the remotest districts.

One may still find broken-down fences, lop-sided barns, bare and desolate dwellings, surrounded by arid patches of sand and adobe beaten hard and sterile by constant travel; one may still find haggard housewives and sallow husbandmen that look like tramps,—people that rise at three in the morning and who work unremittingly until seven at night, retiring without having had one moment's rest, recreation or real pleasure.

A good financier remarked recently that he would ask no better opportunity for making money than he would get by going about the country buying up these farms that are being offered for sale at a sacrifice because they seem to be at the last gasp. He said he would whitewash and mend the fences, build verandas around the house ornamented with the fancy woodwork that is both cheap and fashionable; paint the house in fresh tints of olive or pale brown; plant quick-growing vines about the verandas; move the barns and chicken coops a good bit away from the dwelling, straightening them up, nailing cleats over the gaping cracks, whitewashing them inside and out, and hanging all the doors on good, stout hinges; plant a small lawn or orchard where the barnyard formerly stood; put an arch over the gateway and paint some high-sounding name on it like "Craig y Nos," or "Bellefontaine Terrace;" and then sell the whole outfit to the homeseeker who would surely be attracted by the neat trimness and evident air of prosperity about the farm.

The railway stations of a country are another indication of the growth and prosperity of a community. The first station is a stopping place; this gives way to a bench; then to a draughty shed; then to a box-like but weather-proof shanty. When real maturity arrives and man doffs the barbaric garment of goatskin, outgrows the ugly overalls of blue jean, and dons the neat business suit and the starched collar,—with all that comes the commodious station building of brick or stone, finished inside with polished woods, a cheerful hearth on which blazes a friendly log on cold days, comfortable chairs to rest weary passengers, and around the outside of the building a beautiful patch of garden that entices the tourist to stop and see the place, and often serves to give him his first strong desire to settle in the vicinity permanently.

The first settlers of a territory get along with little other reading matter than that afforded by one or two religious books, and one paper, perhaps, devoted to the technical side of farming interests. They work too hard to feel the need of reading. There soon comes a time when they grow restless for news, fresh or stale, but news. As leisure increases and they find time to think they become more discriminating and establish a local paper, weekly at first, then daily.

With the advent of the illustrated periodicals comes the attempt to have a piano, some colored pictures and a decorative interior; so the sanded floor, the green window shades, the haircloth furniture and the tallow candle pass away.

In literature, all these crudities of the transition period work themselves out in the writings of the country. First we find the simplest record of local news; then a record of foreign affairs is demanded; then comes the production of rhymes and jingles, followed by the simple narrative of daily life as seen with superficial eyes; descriptive writing comes next with the admixture of some sentiment; then, last of all, with respite from exhausting labor and coarse environments, come a finer and more penetrating style of thought-record, reflecting, analytic, epigrammatic, fanciful, lofty and polished.

When men have ceased to struggle like savages for the dollar that is to ward off starvation, or for the dollar which they are straining brawn and muscle to convert into two without lessening the weight, size or appearance of either; when they have grown out of the period when they are insane to gamble for all the possessions of the whole world; when they are content with small and simple things, with a kinship for God and nature,—then from earth's treasure house are brought forth Shakespeares, Schillers, Dantes, Emersons, Holmeses, Whittiers, Spencers and all the great and noble statesmen and thinkers of which history boasts.

Recognizing that environments indicate our prosperity and growth, we should exert ourselves as individuals to hasten, with all the power at our command, that period when mature civilization stands out from the rough block of marble, the perfect form, the crystallized thought, the carved ideal.

THE experiments of the rain-makers, private and governmental, have aroused no little interest, not alone in the arid districts throughout the country, but throughout the world. On one hand we have General G. R. Dyrenforth and his aid claiming (the latter in the October CALIFORNIAN) complete success, while on the other several well-known scientists prove to their own satisfaction and probably that of others that to produce rain in the manner indicated is an impossibility. Time alone will settle the matter; but at least some good results have been produced in calling attention to the fact that many things supposed to be unattainable may yet be possible. Some ingenious person has a wide field in the interests of the orange-growers, as an example. The orange-growers of Florida and Southern California are to a greater or less extent at the mercy of the frost. It is fair to assume that at least once in five years the Florida groves are nipped by this treacherous enemy that slips into the groves in the wee sma' hours of the morning and possesses itself of the growing fruit, the fate of which is sealed by the noonday sun. A few years ago a most disastrous frost made itself felt in Florida, even killing fish far down the coast and out upon the reef. Thousands of dollars passed out of sight in that one night. Every year in Southern California there is the same dread all night. The old trees at Los Angeles and San Gabriel show that the frost has made no inroads upon the trees themselves in twenty years. Last month the mercury took a threatening dip at Riverside, Redlands and other localities, going down to twenty-six degrees in some places, but all in all doing but little harm except to nursery stock. The fall is suggestive, however, that the orange-grower should not be entirely at the mercy of the vagaries of the climate; and that human invention should be able to accomplish something in the premises. To come to the point, what is needed is some arrangement that will raise temperature in the orange groves of places like Riverside. This is at present accomplished in a crude way. A prominent grower stated that during a nipping frost he raised the temperature under his trees three or four degrees by burning a smudge. Let some one invent a systematic method of accomplishing this elevation in all the groves,—some method that is at once cheap and effective,—and fortune and fame await him. We see the orange-grower of the future protected in this way: a dial in his library indicates the approaching fall in temperature; when, instead of rousing the neighborhood and spending the night in the grove, the owner touches a spring, and the universal orange protector begins its work, indicating immediately a rise of temperature in the vicinity of each tree. This may read improbable, even absurd, yet in a crude manner it is being done to-day, and will take form in a few years in a perfected arrangement worked by the Orange Growers' Protective Insurance Company. In other words the company will guarantee to protect the groves from frost as the companies of to-day guarantee against fire.

WAR with Chile seems a long way off at present writing, yet the rumors and excitement attendant upon it have been of the greatest advantage to the Pacific Slope. The people of California have done everything within their power to gain the attention of Congress; Senatorial Committees have been received and entertained; taken around our harbors and regaled with the absurd fortifications and defenses of the Coast. The heads of departments for the last five years have in their reports to the Secretary of War called attention to the fact that the Pacific Coast was defenseless. The people of the citie have sent communications to Congress and the President stating that the lack of a defense of some kind was detrimental to the country, yet nothing was done until there seemed to be a possibility of war with Chile, then a movement was made, and it is reported that a gun or two guns will be sent to San Francisco. The truth is that the present condition of the harbor of San Francisco and San Diego is an outrage upon the people of the State; the defenses are a farce. War is always a possibility, and the ports of this Coast should be placed upon a war footing without delay.

THE article in the present issue of THE CALIFORNIAN on the Chinese—the second in the series—tells a shocking story of the methods employed by the highbinders in their traffic in human beings. It shows that slavery still exists in this country, and that women and children are still bought and sold, educated up, as it were, to a life of horror and shame. It is impossible to state the truth in a magazine that goes into thousands of homes in the country, but to those who are interested in this subject it may be said that one-tenth of the horrors are not told, and have been eliminated from this article. The question for Americans to consider is whether this sort of thing is to go on, if not, how is it to be stopped? It is unquestionably true that the influence of the Chinese upon the American nation is bad, unhealthy in every way. We have restriction now, let legislators take one more step and give us an act that will restrict the highbinders of America in dealing in slaves.

New Books

AMELIA B. EDWARDS, probably one of the best Egyptologists living, has recently published, in book form, the lectures she delivered during her visit to the United States. The work is copiously illustrated, and contains, besides, comprehensive notes and references for the use of those not thoroughly familiar with the subject. The table of contents indicates the following topics: "The Buried Cities of Ancient Egypt;" "Portrait Painting in Ancient Egypt;" "The Hieroglyphic Writing of the Ancient Egyptians," and "Queen Hatasu and her Expedition to the Land of Punt."

William Hamilton Gibson offers us, this year, an exquisite volume entitled "Sharp Eyes: A Rambler's Calendar of Fifty-two Weeks Among Insects, Birds and Flowers." We owe a great deal to Mr. Gibson for the delightful means he employs to familiarize our people with the smaller forms of plant, insect and animal life. Who does not recall with genuine artistic satisfaction the articles in the *Harper's Magazine* for years past, that have carried us over the squirrels' highway, through meadows by lantern light, through New England forests in the tender spring, the rich summer, the mellow autumn and the barren winter time? Few Americans have done more than Gibson to stimulate, to its highest attainment, artistic illustrating in our best periodicals: indeed, he may be credited with the founding of the present school of periodical illustration.

The career of the young Emperor William II. of Germany has been followed with close interest ever since his unexpected accession to the throne. The conservative German element shook its white head with doubt and apprehension for a time; the revolutionary element magnified the eccentricities that in a person in the common walks of life would have been passed unnoticed; the army polished up its equipments in anticipation of immediate outbreak; the press of the whole world worked itself into a fury of prophecy regarding the outcome of establishing on a conservative throne an arbitrary, hot-headed, egotistic, impetuous and callow youth. But Germany has jogged along safely enough under the new ruler; young William has overcome, to a great extent, all antagonisms; diplomatic relations are sustained with dignity; and the commerce of the country thrives. Harold Frederic, the well-known author, in an admirable manner, has just published a most interesting work tracing the character development of the Emperor since his accession to the throne. The work was first published in England, but the demand for it has been so great that an American edition is now offered to the hungry reading public by the Putnams of New York.

There has never been a time when economic subjects demanded as much attention and study as they do to-day. The American Economic Association, of which Francis Walker is the President, and Richard T. Ely the Secretary, now numbers some eighteen hundred members I believe; and to the untiring efforts of this association is due much of the quickening of thought concerning the bettering of our social and material conditions. The latest contribution to the economic literature is an exhaustive report, issued by the United States Government, on the subject of "Streets and Highways in Foreign Countries." The foreign consuls have been required to present full, specific reports of road laws and road construction in their respective countries; and the result is a most valuable and important treatise for the use of those engaged in carrying out public improvements. Well-constructed highways are so necessary to the best development of the commerce of a country that one cannot place too high an estimate on the thoughtful consideration of all branches of knowledge pertaining to the subject. It seems a little singular, but the fact is, the cyclers have done more within a few years to bring the subject to public attention than all the treatises ever written and all the ordinances ever passed in this country; and one of the most prominent cycle manufacturers of this country offers prizes from time to time for able essays on the subject

of road-building, in order to stimulate effort among the people to provide smooth, permanent roads for the comfort of all wheelmen.

How seldom we realize the price paid by genius for recognition and fame! A few years ago a small volume of poems was launched upon the market by a local printing house. The author's name was not familiar, and it was a foreign one. The verse was uneven, and the use of words, in many places, strained and unnatural. Yet through it all one could feel the poet soul struggling for expression in an unfamiliar tongue, so that it might reach a larger reading world. Something interested me in those poems so truly that I sought out the author and asked him to call upon me. He was a slender, young Italian, not yet twenty years of age. He had come to America at the age of nine, but had enjoyed no educational advantages because his family regarded education and a knowledge of books as instruments of Satan, to hasten the fall of mankind. The boy's father kept a bar; and the son washed and wiped glasses, ran errands, learned much that he might better have never known; and, what is stranger than the rest, by some freak of inheritance, he dreamed dreams. The family was large, the income small. Finally the father died. With a legacy of $1,200 realized from the sale of the bar-room accessories, the mother bought out a small restaurant up town where the hands of a cable car company take their meals. Here the young poet found much for his hands to do. At four or five o'clock in the morning he took a light basket and walked to the hills skirting the sea, in search of mushrooms and salads. His mother did the cooking; and he washed the dishes and waited on the patrons, the other half a dozen children being too young to be pressed into intelligent active service. The mother allowed this son three dollars each month for spending money; this he invested in books. Going to the second-hand shops he selected, not the recent works in good condition, but old, torn and shabby volumes, so that he might secure the most for his money. This store he enlarged somewhat by frequently exchanging the read volumes for unread ones. At his home the utmost caution had to be observed with this treasure, for when his family found him absorbed in his reading, they solemnly warned him of the perdition he was surely courting. They themselves could neither read nor write! In the midst of poverty, constant and wearisome drudgery, unsympathetic environments, and a total absence of congenial social intercourse of any kind whatsoever, the young poet burst his chrysalis and began to soar and to sing. I no longer smiled at the limping lines after I gleaned these facts; criticism that would apply to the scholar would be sacrilege when applied to this young singer. His reading had been varied, embracing classical lore, Homeric poetry, history, biography, modern poetry, literary criticism, fiction and Oriental research. In his conversation he quoted freely and correctly from the brilliant writers of all ages; and his criticisms showed a discrimination worthy of a person who had been trained in the best modern schools of thought. His grammatical forms were not always faultless; but his mind was clear and bright. Recently he has issued a second volume of poems which show a wonderful advance in powers of expression. The volume is called "Poems of Humanity." What strange freak has given young Lorenzo Sosso the power he evidently possesses,—the insight that is startling in one so curiously environed? Has the ceaseless struggle against destiny developed or dwarfed his mental and spiritual capacity? Is it a reincarnation? or is it an example of a force that *will not* be suppressed? Permit me to present a few of his thoughts chosen quite at random:

"MYSTERIES.

"Not once has the Sphinx of the Ages
Been answered the question she asked:
Not once have the seers and the sages
Life's mystical meaning unmasked.
Not once has the spirit anointed
Yet entered her temple so vast;
Disheartened, forlorn, disappointed.
We question in vain to the last.

Thus life still conceals her deep story
To which we can scarce give a name;
We catch but a gleam of its glory,
We know but a word of the same.
The rest lies beyond our exploring,
Through Nature's insoluble scope;
Whatever men dream while adoring,
Faith's beautiful idol is Hope."

* * * * * *

"Why should not every spirit be
As calm as sleep, as pure as snow;
Not like a restless, moaning sea,
Forever in fierce ebb and flow."

* * * * * *

"How oft my thoughts are like the stars that pale
Before the glory of the morning sun.
So much to do; so much, alas! undone;
My spirit ever wearily doth bewail.
Yet fragrance of Hope's blossoms I exhale,
Spend nights in dreaming of Fame's laurels won,
As if life's everlasting race were run,
And I were crowned, and men had cried All Hail!
Ah, better to pursue than to perform,
If to perform would cease the fierce desire
That haunts the soul still seeking regions higher,—
The pinnacle surrounded by the storm.
Better the crags of snow 'midst flakes of fire,
Than the sweet South, so dreamy and so warm."

* * * * * *

"Italia, O Italia! if I be
Far from thy clime, and dwell in other lands,
And break the bread of Christ with alien hands,
And boast myself as one among the free,
In vassalage to glorious liberty:
Since never here tyrannic rule demands
Lowly subjection, nor with chains and brands
Binds Freedom's spirit of eternity;
Yet do I dream of thy memorial shore
Which girds thee as a zone some virgin bride,
Beloved by some fair Grecian youth of yore;
And my heart flows unto thee as the tide,
Though thou art not, nor will be evermore,
As beautiful as when Song with Art allied."

The fiction of the month is strangely lacking in character or individuality. The most interesting publications are the translations from Russian and Spanish writers, and even they suffer more or less in the translation. "Tales of Three Centuries," from the Russian of Michael Zagoskin, is the strongest of these foreign works, being infinitely better than anything that Russian writers have contributed to the reading public for some time past.

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1. "Pharaohs, Fellahs and Explorers." Amelia B. Edwards. Harper & Bros. $4.00.

2. "Sharp Eyes." William Hamilton Gibson. Harper & Bros. $5.00.

3. "The Young Emperor William II. of Germany." Harold Frederic. G. P. Putnam's Sons. $1.25.

4. "Streets and Highways in Foreign Countries." Government Printing Office, Washington, D. C., 1891.

5. "Poems of Humanity." Lorenzo Sosso. San Francisco.

6. "Tales of Three Centuries." From the Russian of Michael Zagoskin. Translated by Jeremiah Curtin. Little, Brown & Co., Boston, $1.00.

The Highest Mountain in North America.
Mount St. Elias, 19,000 Feet.

THE CALIFORNIAN.

VOL. I. MARCH, 1892. No. 4.

THE LUNAR CRATER COPERNICUS.

BY EDWARD S. HOLDEN,

Director of the Lick Observatory.

THE accompanying figure* was made from a negative of the moon taken in the focus of the great telescope on August 25, 1890, at 8 hours, 0 minutes. The original picture of the moon was about five and one-half inches in diameter. A small part of the original showing the lunar crater *Copernicus* has been slightly enlarged and is given in the cut. The scale of the picture is such that the diameter of the whole moon would be about fourteen inches. The diameter of the crater itself is fifty-six miles. The cardinal points, north, south, etc., are indicated on the picture.

The walls of the ring-form are not perfectly circular, and they vary somewhat in height at different points.

Their general elevation above the floor of the crater is about eleven thousand feet, rising in places to twelve thousand or even thirteen thousand feet. The slope of the interior terraced wall is far more steep than that of the exterior; and this is a general rule in all such formations on the moon. The average exterior slope of lunar craters is six degrees to seven degrees, while the average interior slope is thirty-five degrees; that is, they are really very gently sloped mounds with a steep-sided pit in the midst. The terraces of the walls deserve careful attention; and, if the cut is examined with a common hand-magnifier, they can be seen a little better.

The floor of the crater is by no means smooth; and from it rise two groups of central peaks, the highest of which is some twenty-four hundred feet. Like all the central peaks of lunar craters, they are much lower than the bounding walls.

Copernicus is surrounded by a mass of mountains, hills and ridges of highly complex structure, and by a marvelous system of brilliant streaks radiating from the crater as a center, and extending in some cases for four hundred miles, or even more, till they meet similar streaks from other craters,—from *Kepler*, *Aristarchus*, etc.

This famous lunar mountain has been drawn and described many times. The very best drawings show a number of minor features which are much too small to be represented in the engraving; but no drawing has ever given anything like the true plastic effect, and even the very best drawings fail to show details which are evident on the original photograph.

To make such a drawing at the telescope, the observer must begin by

* Figure 1.

sketching in the forms and shadows accurately, correcting here and adding there, until after one or two nights a skeleton for his finished picture is obtained. By this time the shadows have so changed that most of the work must be put by for a month, until the same phase of illumination recurs.

The next opportunity must be devoted to more corrections and additions, and so on, lunation after lunation, until finally the best possible result is attained. For instance, Schmidt's first recorded observation of *Copernicus* was in 1842 and his last in 1873. And even this best possible result will be highly unsatisfactory. If it is a map it will lack plastic effect; if it is a picture the minor topographical features will necessarily be more or less neglected. It is here that photography becomes of priceless advantage. The preparations for the photograph must be made with the greatest care; the picture must be taken when the atmosphere is steady, clear and transparent; when there is no wind to shake the telescope. But when the right opportunity occurs an exposure of a few tenths of a second is sufficient; and a permanent autographic record of things as they are is obtained. The negative can then be treated in many ways and many differing copies obtained, each one true in itself, but each one bringing out some one point with especial clearness. In the first place it can be enlarged so as to bring out the minor features. It can be "en-smalled" so as to sacrifice the minor details, while the grander relations are made more prominent. Each

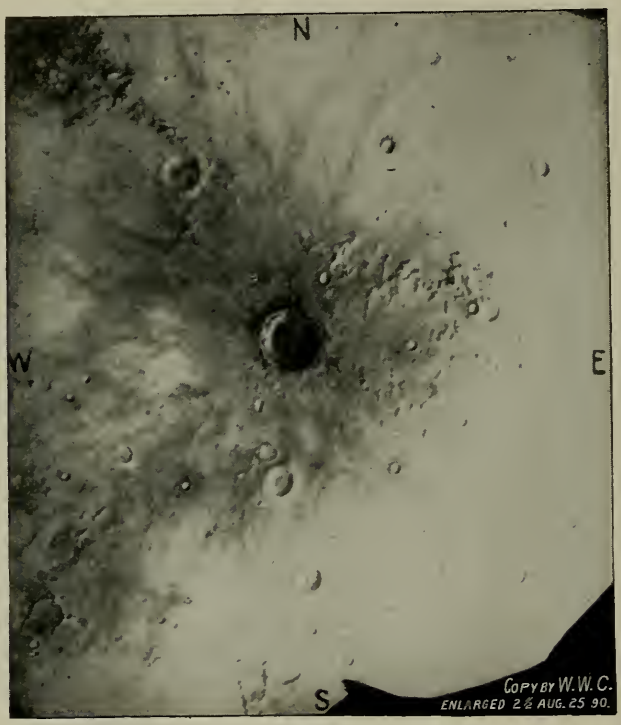


Figure 1.—The Lunar Crater Copernicus.
Enlarged from a Negative made with the Great Telescope of the Lick Observatory.

Figure 2.—The Lunar Apennines: Archimedes.

From "The Moon," by Nasmyth & Carpenter. London: John Murray.

of these results can again be copied in various manners. A certain exposure given to the copy will produce the best general plastic effect, and it is such copies that are desired by the artist and the general reader. But every single feature on the original has an illumination and a distinctness of its own. If we double or treble, etc., the first exposure, or if we halve it or take a third or even a tenth part of it in making our copies, each of the results will show some special feature or region or relation in a new and in a true light.

In this way we have made at the Lick Observatory discoveries of quite new features,—ruined craters fifty miles in diameter, long streaks and ridges, not suspected or even not perceptible in ordinary visual observation. The key of this method is that the *contrasts* can be artificially (photographically) increased. Great as have been the services of the long list of accomplished astronomers who have devoted themselves to selenography, I have no hesitation in saying that all their work taken together is not superior in intrinsic value to that which some "lonely and athletic student" could draw from a series of moon photographs like those in possession of the Lick Observatory, if he were to devote his whole time to this one subject. Unfortunately the very limited corps of observers at Mt. Hamilton will not permit us to undertake anything more than the mere production of the negatives. By depositing sets of these at certain scientific centers in America and Europe (as we do) they will be sure, sooner or later, to be studied by competent observers who have the necessary leisure.

It is a thousand pities that our income is not sufficient to allow us to make this thorough examination at the Observatory; but, at least, we are doing the next best thing by putting our negatives at the free disposition of all the world; and we are extremely fortunate in having secured the co-operation of a distinguished selenographer and artist,—Professor Weinek, director of the Observatory of Prague,—who is devoting a very large portion of his time to studying our negatives, which are regularly sent to him. The reproduction of such drawings as Professor Weinek's is a very delicate as well as costly matter; and here again the Observatory has been so fortunate as to find a friend—Mr. Walter W. Law of Yonkers, N. Y.—who is ready to bear the considerable cost of making the most perfect heliogravure copies.

If the reader will look at Figure 1 once more, he can probably follow the following identifications. The numbers in parentheses are the diameters of the craters in miles.

The prominent crater about three-fourths of an inch south of *Copernicus* (56), is *Reinhold* (31), and the next marked feature in the same direction is the crater *Landsberg* (28). Between *Reinhold* and *Copernicus* are two small deep crater-pits close together, A and A^1. These are, by the way, *precisely* south of the center of *Copernicus*.

The crater half an inch north of *Copernicus* is *Gay-Lussac* (15); and the mountains in which the latter is situated are the lunar *Carpathians*, whose peaks vary from twenty-five hundred to seven thousand feet in altitude. Towards the northwest, about an inch in the picture, is the ring-crater *Eratosthenes* (37). From *Eratosthenes* two spurs of mountains extend, one southwards to the white outlines of the ring-crater *Stadius* (43), the other northwestwards. The region bordering these two spurs and lying towards the southeast is the *Sinus Æstuum*. The eastern wall of *Eratosthenes* is 7,450 feet above the outer surface, and 15,800 feet (the height of Mt. Blanc) above the interior of the crater.

On the original it is easy to trace a very interesting line of confluent crater-pits, which extends from the southeastern wall of *Stadius* towards the north; this line crosses the direction of the *Carpathians* about half way from *Eratosthenes* to *Gay-Lussac*.

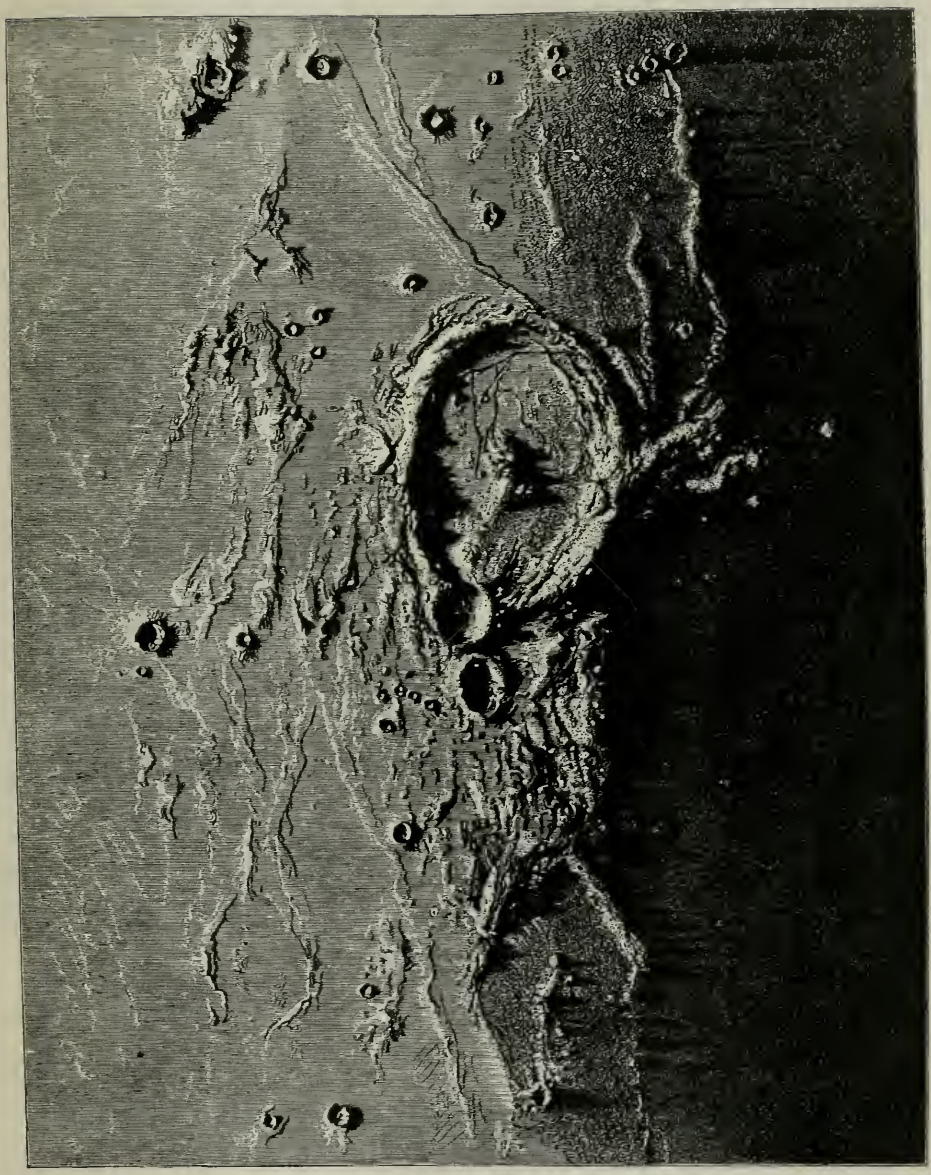


Figure 3.—Gassendi, November 7, 1867.

From 'The Moon, by Nasmyth & Carpenter. London: John Murray.

Here then is a line of weakness, and along this line there have been many separate small explosions, each leaving its mark in a crater. The region between this line and the western wall of *Copernicus* is literally filled with such small craters (they cannot be seen in the picture because they are only visible under one particular illumination). They are somewhat like the *fumeroli* of Italian volcanoes, on a larger scale.

The preceding description, though somewhat tedious, is necessary to put us in possession of the facts which our picture shows. But the real question now comes: What is the veritable explanation of all this? How shall we conceive to ourselves the process by which these features were formed? What is the relation of these craters to each other; of these bright streaks to the central crater; of the mountain chains, the rows of crater-pits, the interior terraces and hills to the volcanic forces by which they have been created?

If these questions can be answered we shall really know something of the features which so far we have merely viewed. Notwithstanding the immense pains which have been spent in delineations of the particularities of this and other regions of the moon's surface, there is as yet no general and satisfactory answer. We seem to be awaiting some observer who must be at once an astronomer and a geologist, and who will devote his whole life to the geology of the moon. Even the most fundamental questions are not settled. We have called *Copernicus* a "crater," that is, *the* crater of a lunar volcano. Some of the best authorities doubt whether it is a true crater at all.

As with this, so with other questions. Many, indeed most of them, are in doubt; and it is certain that they will not all be definitively settled until the advent of our geologist-astronomer, who may not yet be born.

Under these circumstances, it will not be impertinent if I try to express the convictions to which my own observations of this particular region have led me, especially if I do this with the necessary reserves, and with an apology in advance for any failures to properly interpret the geological evidence. No one can examine these wonderful structures without forming *some* idea as to their nature, and my own is somewhat as follows:

In the first place it is obvious at a glance that *Copernicus* is the dominating feature in the landscape. The surrounding ridges, crater-pits and bright streaks radiate from and depend on this central crater precisely as the corresponding features depend upon *Mauna Loa*. Its vast mouth (56 miles in diameter) is, in fact, a crater,—one crater, or rather a caldera. Sometime in the past, vast explosions of steam and lava have blown out this immense cavity and left these bounding walls somewhat as they are now. We must recollect that the volcanic forces on the moon have been far more violent than they are now on the earth. We have to remember too that the surface of the moon as we see it in this picture is but a single phase of the history of this landscape. There were other volcanoes at this place centuries before *Copernicus* was formed, some of which can even now be traced; and we are only looking at the very last act of a long drama. Underneath the floor of *Copernicus* were pipes leading directly to the living fires below; and the interior lavas were continually rising and falling in these pipes, seeking for outlets through cracks in the mountain side, along lines of weakness everywhere, even overflowing the rim of the crater at times. When the level of the lava in the interior was high it would overflow the floor of the crater and would soon cool. If another vent was found at a lower level, through a crack in the mountain side, the lava in the pipes would sink and leave the floor unsupported except at its edges where it joined the walls. In time the floor would break off all around the rim and fall, leaving a terrace to mark its former position. A

new rise of lava in the pipes would form a new floor, and this in turn would form a new terrace. Hundreds of these may have been formed, and scores of them may have left no trace; but the terraces we now see are, it seems to me, indubitable proof that this process went on in *Copernicus* al-

lava over the whole floor of the crater and left it comparatively smooth as it now is.

The original negative shows ridges streaming off in all directions from the outer walls of the crater. Some of these have been formed by elevations of the surface by forces from below,

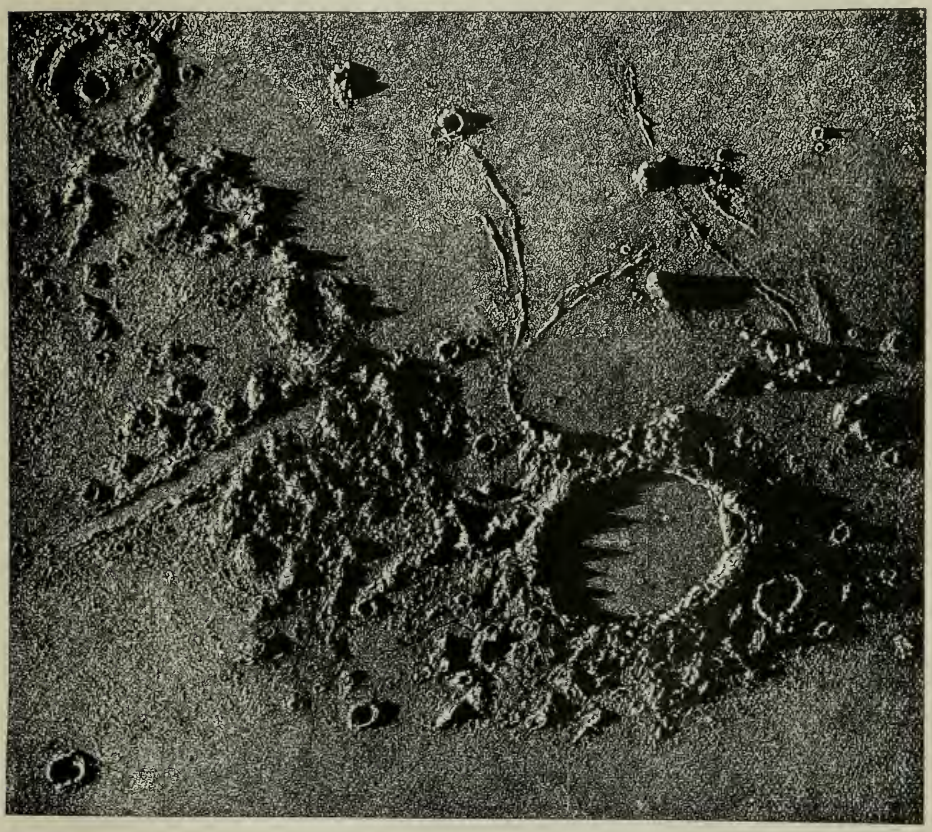


Figure 4.—Plato and the Lunar Alps.

From "The Moon," by Nasmyth & Carpenter. London: John Murray.

most precisely in the same way that it is even now going on in *Kilauea* in the Sandwich Islands.

There have been scores and scores of central mountains formed within the crater (just as at *Kilauea*). Those that we see now are the last ones. They undoubtedly contain volcanic vents, and at the very end of the volcano's history they poured a sheet of

and some of them by lava flowing over the lip of the crater itself, or through cracks in its sides. The bright radiating streaks near *Copernicus* are intimately connected with these ridges. Sometimes the streaks themselves seem to be nothing but very low ridges. In other places they seem to be lava flows which have partially filled up ravines lying between two ridges, or

which have followed the direction of earthquake cracks and fissures, forming dikes.

When one is riding across country in the beautiful island of Hawaii and comes to some region which is not covered by dense tropical forests or by luxuriant sugar plantations, his attention is sure to be directed to one of the wonderful lava flows from the great volcanoes of *Mauna Loa* and *Mauna Kea*. He asks his guide, "What is this?" "Oh, this is the lava flow of 1852." Directly he comes to another river of frozen lava,—"And what is this?" "This is the flow of 1881." And so on till in a few days' journey he has crossed a dozen flows all radiating from the central mountain like rivers, all tending towards the sea, and some of them actually reaching it. Now, in Hawaii, history begins with the advent of the missionaries (1820). The larger part of the island is covered with forest and plantation, and therefore is hidden from sight. The action of wind and rain and air disintegrates the lava into soil with amazing quickness; and yet it is impossible for the traveler not to carry away in his mind a picture—a ground plan—of the island as it really is. Here is the central volcanic focus, and the lavas from its interior have built up the whole island mass. On the top of the older lavas, which are carved into ravines and cañons by erosion, lie the radiating lava streams which go in all directions from the center, and which extend even to the sea (thirty-five to forty-five miles). Here are the earthquake cracks and fissures filled up with later lava flows. Here are long tunnels whose broken-down tops leave marked channels,—streaks. Here are rows of confluent crater-pits of all sizes. Here are larger craters like *Kilauea* with subordinate ones like *Kileaua-iki*. Here are huge cracks in the mountain sides where the pressure of the interior lava has broken through.

I do not think that these bright streaks in the moon are volcanic ashes; for I see no reason why they should lie in radiating streaks as they do, unless all the streaks were in the bottoms of the cañons, which they are not. Again, volcanic ashes should lie in general on the *leeward* side; and I see no evidence that they are not equally distributed. Within the craters are the successive terraces, marking successive levels of the lava flow. The level of the floor of *Kilauea* is to-day more than four hundred feet higher than it was fifty years ago. Some of the older terraces are now submerged, and new ones are in process of formation. Here are the interior cones and mountain masses. In fact every feature which we see in the crater *Copernicus* seems to have its analogue if not its counterpart on this small island of Hawaii.

If I am straining the analogies, I beg the pardon of my confrères, the geologists;—and I am aware that one of the very best observers of lunar topography has stated most emphatically that such an explanation as this will not serve. It, nevertheless, seems to me to be the true one for the region we are considering, while it certainly will not explain other phenomena of a *somewhat* similar character on other parts of the moon. Such analogies will surely strike any astronomer who travels in Hawaii. The only serious question to my mind is in regard to the difference in scale. In Hawaii we have central craters or *calderas* of two and three miles in diameter, and lava-flows from them of forty miles long which would be much longer if they did not end in the sea. On the moon we have the *caldera* of *Copernicus*, which is fifty-six miles in diameter, with lava-flows of four hundred miles or so. Having regard to the immensely greater effect of volcanic forces on the moon (where the force of gravity, for example, is not more than one-sixth of that on the earth), I confess that I see nothing overstrained in drawing the conclusion that in the volcanoes of Hawaii we now have

Figure 5.—The Moon.
Photographed August 24, 1888, at Lick Observatory.

before our eyes something like a working model of what *Copernicus* once was.

This, then, is what seems to me to be the key to the landscape shown in our engraving; and it gives a kind of unity to its complex confusion and wild variety. There are other regions on the moon far more difficult to understand; but here, at least, it seems that a kind or order can be made to arise out of the chaos.

YESTERDAY.

By James T. White.

To-day,—ah well!
To-day is fair;
But need I tell
What sweeter air,
Fresh as the morning breath of May,
Blew from the hills of yesterday?

BAVARIA AND THE TYROL.

By E. W. Porter.

TO the Tyrol, Ober-Ammergau and King Ludwig's castles a great tide of English and American travel on the Continent is directed every year. And, shaking off the sad thralldom which cannot be escaped in the earnest village sacred to the *Passion Play*, away rolls the audience of the day before to apotheosize the demi-mortal Ludwig in the splendid palaces which no longer know his godlike presence.

This trip through the Tyrol has a wonderful charm, owing to the picturesque peasant life, the romantic history attached to each spot; and, in the neighborhood of the castles, to the spirit of Ludwig, which seems to haunt hill and glen, and bring before us with ever-increasing vividness the sad incidents of his pathetic yet ludicrous life.

We made the trip on foot, three of us, in short skirts, stout shoes, a bit of luggage strapped to our backs, and no protector save our umbrellas, which served in the several capacities of alpen-stock, defense from rain, sun and brigands, all of which offices, except the last named, they were called upon constantly to fill. We were delighted with our mode of travel, which was, after all, as fast as the post-wagons, we having the advantage of short cuts by pretty mountain trails. We easily made fifteen miles a day, often twenty, and had far better opportunities of seeing the people and of studying the exquisite flora than those who drove along the highways.

The palace of Linderhoff is only seven miles from Ober-Ammergau by the high-road, and only a third of that distance in a direct line across the steep mountains. It is built on a small hill set between darkly wooded mountains, which are in turn overtopped by bare crags and snow-capped peaks. It lies in the midst of this rude nature, a strangely incongruous bit, an exquisitely beautiful creation of art.

As to the interior,—palaces all bear a wearying similarity of lavish display of gold, silver and precious stones. There are a few things here, however, that bear the impress of Ludwig's personality. The chairs are wrought in the shape of thrones, that they may be a constant reminder of his supreme authority. To avoid the presence of attendants, the dining-table is arranged to appear and disappear through an opening in the floor, which is clearly visible by a square cut into the tapestry carpet. Portraits of the imaginary company with whom he conversed while at table beautify the walls and are invariably the wits and beauties of the courts of Louis XIV. and Louis XV. On the floor of the dining-room there is a large rug made of black and white ostrich plumes.

A grotto cut into the hillside and converted, artificially, into a cave hung with stalactites is yet more fairy-like than the palace. Its weird blue light falls upon a mad, rushing waterfall which forms a lake of one-half the cave, and on this lake floats a gilded barge. A magnificent painting representing Tannhauser at the Venus berg is set into the wall on one side of the cave.

One soon grows into sympathy with the deluded monarch, and feels it to be almost a profanation to walk with this stream of curious tourists through the scenes of splendor so long and so sedulously guarded from the eyes of beholders, where so few years ago the lonely monarch lived solitary, haughty and supreme.

A story is told of a renowned opera singer whom Ludwig had summoned to his princely barge. Perceiving the

power of her song upon him, she presumed to touch his sacred person. With one majestic sweep of the arm he threw the offender out into the lake, from which she was left to scramble as best she might.

The castle of Neuswanstein lies at some distance from Linderhoff, seven hours fast walking ! It is unique and much more attractive to the palace-wearied tourist, the situation being grander and the castle more imposing than the other. Still it lacks the supernatural effect which accords so well with the character of the self-worshiping king.

The people of Bavaria loved Ludwig, and they love his memory. It is strange, too, for he almost swamped them in debt, and as he always traveled by night they rarely saw his royal person.

These castles, however, have become a source of good revenue, the entrance fee being three marks and the number of visitors countless.

After leaving Hohenswangau there is a rapid succession of villages until you arrive at Innsbruck,— Fussen, Reute, Garmisch, Portenkirchen and Mittenwald,—fascinating old towns,— each having its peculiar historical importance; its ruins testifiying to many battles; its church fantastically frescoed with vivid and impossible saints and Madonnas; its picturesque squalor; and its population of pretty, quaint children, hard-looking women and lazy men.

King Ludwig.

Garmisch and Portenkirchen lie separated by a tiny meadow at the foot of the highest mountain in all Germany, the Zugspitze. Portenkirchen is impressed indelibly on my mind as being the scene of the drama in which two hundred marks belonging to me played the leading rôle. I here had an opportunity of testing the efficiency

Neuswanstein.

of the south German police. I left the purse on the counter of a shop, and returning immediately to claim it, the girl, who was the only occupant of the place, denied all knowledge of the vanished article. A visit to the chief magistrate was unavailing, so I went to the headquarters of police. I found the young captain drinking beer in the Wirthshaus. He listened with indifference to my story, flirting the "Englander" seems perfectly legitimate in their eyes.

Garmisch is a popular summer resort for Austrians, Germans and English, and the surrounding mountains are famed as good hunting-grounds. The Prince Regent hunts in these mountains. Lord Wilton has a villa here, where he entertains many notables.

The Tyrolese Wirthshaus is one of the most important features of the

Portenkirchen.

meanwhile with the maids, and at length he informed me that he knew the shop-girl and liked her very well and that she could not possibly be guilty. I left the town at once, as I could not subject myself to the torture of witnessing the display of the finery that I knew would be bought with my money. No Tyrolese would serve a countryman in this way, but any advantage that can be taken of an country to the pedestrian. The Wirthshaus partakes of the same unvarying uniformity that everything else in the old country bears. One never, by any chance, meets with a progressive Wirth who, for money-making or for any other purpose, has violated the sacred custom of his forefathers by removing an inch from his hospitable walls the offensive cow-shed and the inevitable accumulation of barnyard

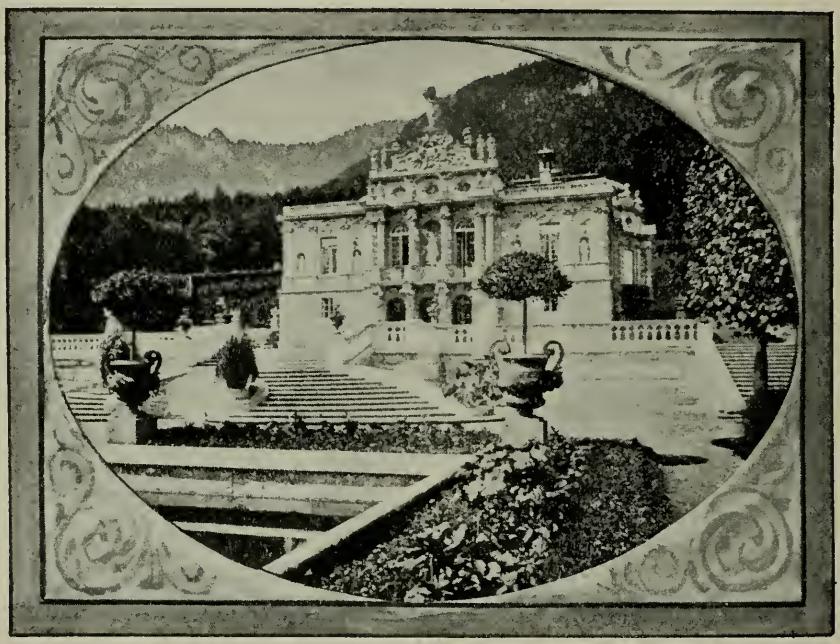
In the Bavarian Alps.

débris. This extension of the kitchen permeates, with anything but an agreeable odor, every nook and cranny of the house. One Wirthshaus can only be distinguished from another by *degrees* of filth.

The Wirth, who in former days was the very soul of the village, the leader of sports in the time of peace, and of her troops in the time of war, has lost the type represented by the brave

a wholesome diet, and cheap, costing not more than two cents.

One thing that can be said of the Wirthshaus is that one can always find a clean, comfortable bed there. It is of most simple make, a comfortable mattress covered with one coarse linen sheet, two downy pillows and a feather-bed which, however, is never long enough to cover one's feet, but always has to be supplemented by one of the



The Palace of Linderhoff.

Hofer, so far as we could discover; if, indeed, we could discover him at all in the crowd of half-drunken, smoke-enveloped men who monopolized the tables in the eating-room. The responsibility of the housekeeping usually falls upon the brisk, pretty maid. In the villages we can have any simple dish prepared at a very moderate cost, but at the wayside inn the maid recites defiantly her menu of black bread, cheese, wine and beer,— quite

pillows. One chair and a table is the only furniture of the room besides the bed. The arrangements for face and hand washing are niggardly ; and altogether the Wirthshaus is not a place where one would care to spend a summer. But with all the drawbacks of frequent rains, unappetizing food and dirty inns our Tyrol days passed like a dream, and we went on our way bearing blossoms of downy Edelweiss to keep the happy time in mind.

ALASKAN EXPLORATION IN 1891.

By John Bonner.

THE year 1891 added something to our knowledge of the great territory which constitutes the northwestern corner of the United States,—not as much as might be wished, but still more than any previous year since the Yukon was first surveyed. Three parties in the service of the Government have been in the field; and one volunteer party, under Glave, one of Stanley's lieutenants, has perhaps done more for geographical discovery than all of them. Lieutenant Schwatka has also taken his customary walk through Alaskan wilds, starting from Juneau, striking a confluent of the Yukon to Fort Selkirk, and then pushing across country to the Copper River; his discoveries, if he made any, have not transpired.

Mr. Petroff, the United States Census Agent for Alaska, has added something to our knowledge of the Archipelago off Juneau, and points farther south, and likewise of the Kuskowkin River; and an occasional traveler has contributed his mite. These explorers will enable the geographers of the Hydrographic Bureau to correct some of the errors and supply some of the omissions in their map of 1891; but they still leave a vast area of country, with rivers, lakes and mountains past counting, as dark a mystery as the black forest which Stanley crossed between the Aruwimi and Albert Lake.

The best known of the explorers of 1891 was Professor Israel Russell of the Geological Survey. It was his second visit, his object being twofold,—to solve the mystery of the height of Mount St. Elias, and to determine the geology of the St. Elias Alps. For his field of operations he started in the last week in March, 1891, in a Revenue cutter which had been placed at his disposal, and, at the very outset of his voyage encountered an evil omen which would have induced a pious Roman to turn back.

On June 6th the Revenue cutter hove to at about a mile and a half from the beach of Icy Bay. The sea was smooth, and the breakers apparently not quarrelsome. Captain Healey deemed it safe to try to effect a landing; and he put the Russell party and their stores and supplies in three boats, which pulled to the beach,—the first cutter leading in charge of First Officer Jarvis. In a few minutes the boat was in the breakers, and a huge wave filled her to the gunwale. Jarvis at once ordered his men overboard, bidding them hold on by the boat. The wisdom of this course was soon proved: the next wave landed the whole party, boat and all, on the beach. But when Jarvis turned round he saw the launch, which was under the command of a volunteer, Lieuteuant Robinson of the Revenue Marine Service, in the middle of the breakers, and her crew overboard trying to swim to shore. They were all but one caught by the undertow and drowned. Lieut. Robinson's body was recovered that night, and was taken to Sitka for burial. Of all the others save one the sea has not given an account. It was a sad beginning for the expedition; and, as a superstitious person might have predicted, it did not prove a success.

Professor Russell succeeded in ascending Mount St. Elias to an elevation of 14,000 feet above the sea, which is 6,000 feet above the point that was reached by the Schwatka party, but he could get no farther. He was enabled, however, to figure that 5,000 more feet of the mountain remained to be climbed, thus confirming the original estimate of 19,000 feet, which it has been the fashion of late years to deride,

and restoring St. Elias' claim to the distinction of being the highest mountain in North America. If the Professor made any geological discoveries he is reserving them for his report to his bureau. Some curiosity is felt regarding his opinion of the coal which has been found in Yakitat Bay; thus far he has preserved a discreet silence on the subject.

E. T. Glave.

In the mean time another Government party, under the command of Mr. Magrath, had spent a considerable period in exploring the national boundary line, which, as every one knows, follows the meridian of 141 degrees. Magrath started in 1889, and sailed up the Yukon, following that river past Fort Yukon, to the point where it crosses the meridian of 141 degrees, and enters Canadian territory. The point of intersection of the boundary and the river he found to be as nearly as possible in 65 degrees north latitude. Here he established a camp, which he named Camp Davidson, after the distinguished chief of the Coast Survey at San Francisco; and from the camp he ran several survey lines, marking the course of the boundary with the usual monuments. This work accomplished, he descended the Yukon, surveying as he went, until he reached St. Michael's at the mouth of the river, and there took ship for Oonalaska. He did not reach San Francisco till the summer of 1891.

A still more interesting expedition was that which was commanded by Mr. Turner of the Coast and Geodetic

The Rancherie at Sitka.

Survey, and which included among its members an intelligent young astronomer, Mr. Edmonds, now a resident of Chicago. They started in March, 1889, and were conveyed by the Alaska Commercial Company's steamer up the Yukon to within fifty miles from its junction with the Porcupine. Fort Yukon, at the junction, is in about 145 degrees. The journey to 141 degrees, which was their objective, was made on foot. They marched up the bank of the Porcupine River to its intersection with the meridian of 141 degrees; and there, in August, 1889, they pitched a camp at a point about 160 miles north of the spot surveyed by Magrath. To the camp they gave the name of Camp Colonna, after the assistant chief of the Hydrographic Bureau. Here they built a house, accumulated their stores for the winter, and when the weather permitted erected the usual monuments to mark the boundary line.

It was too late to think of returning. Black frost made its appearance by the middle of August; ice was freely formed in the Porcupine by the middle of September; and by the middle of October it was frozen over. The explorers made preparations to spend the winter in scientific work. A box was built for the wet and dry bulb thermometers, and raised on a scaffolding twelve feet above the ground;

Totem Poles at an Alaskan Home.

MOUNT ST. ELIAS. The St. Elias Alps, from a Photograph.

every four hours the temperature was recorded. A magnetic observatory was built, and regular observations taken of the variations of the needle. Finally an astronomical observatory was established, and the telescope was brought into requisition whenever the fog and the aurora borealis rendered it possible to use it to advantage. Work was greatly impeded by the cold. Fires were out of the question in the observatories. Two or three times every night the observers had to jump out of bed, cross a couple of score of feet of snow, and take the temperature, or observe the compass, or adjust the telescope, in an atmosphere 30 degrees, 40 degrees, and even 50 degrees below zero. The instruments were wrapped in chamois leather; but for this precaution their touch would have burned like a red-hot iron. In order to enable the explorers to thaw out after a visit to the observatories a brush fire was kindled near the quarters, and over this they chafed their numbed fingers.

Alaskan Indian (Thlinkit).

As the winter advanced time began to hang heavy on their hands, and they resolved to attempt a journey to the shores of the Arctic Ocean, which they figured to be about 230 miles distant. They had not the remotest idea of the nature of the intervening country; but they were young and intrepid, and they resolved to make the venture. Nothing worse could happen to them than to have to turn back, in case they met with insurmountable obstacles. They mustered a force of ten white men and a few Indians, loaded sledges with provisions, and started on their journey into the unknown land in March, 1890.

They had, as Sherman said of another journey, a most agreeable promenade. The weather was cold, the thermometer sometimes recording 50 degrees below zero. But they were inured to cold, and but for the fog which impeded their vision, and which ultimately prevented their taking observations on the Arctic Ocean, they had nothing to complain of, and in fifteen days they reached their destination. On the trip they made a genuine discovery. That was a range of mountains, from 5,000 to 6,000 feet high, crossing the meridian of 141 degrees at right angles, and extending as far east and west as the eye could reach. The range lies about a hundred miles from the ocean, and is marked on no map. The mountains are densely wooded with pine timber, some of the trees being forty and fifty feet high, and six to eight feet in diameter. It devolved on Mr. Turner, by right of discovery, to christen the range, and he called it the Davidson Mountains, after Professor George Davidson. Some of the smaller feeders of the Porcupine and the Mackenzie probably head in this range.

On the other side of the mountains Mr. Turner and party found a tundra country, such as is encountered in Northern Siberia. They marched day after day over a frozen morass, which never thaws, and is probably frozen three or four feet deep. But the traveling was not bad. They had plenty to eat,—chiefly moose-meat. And they had provided themselves with an abundance of tea, which is the only drink an Arctic traveler cares for. Not a member of the party was ill on

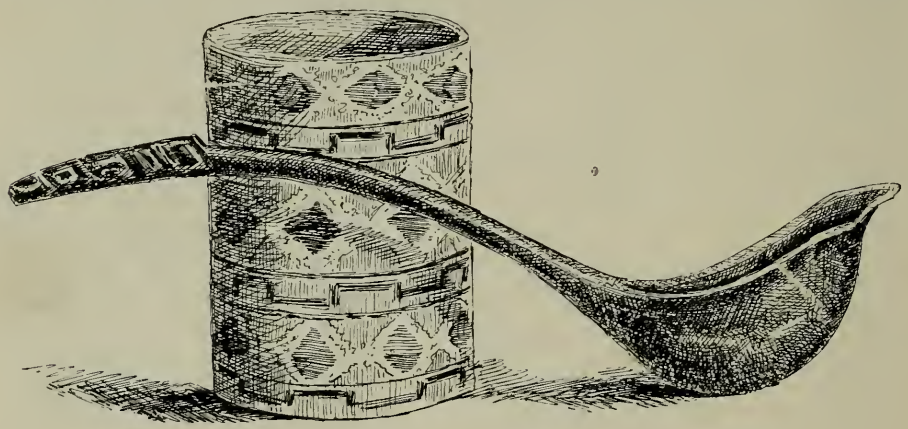
Glave's Horse on Snowshoes.

the trip. It would have been agreeable to linger on the Arctic shore for the purpose of astronomical observation, but in that latitude winter waits for no man, and they had to hurry back to the Porcupine and the Yukon, surveying both streams as they went. On the latter river they were fortunate enough to strike transportation at once, and in September, 1890, they found themselves once more at St. Michael's.

Here a disappointment which might have unmanned less resolute explorers awaited them. The steamer that was to convey them on their homeward journey was gone. The season was

Not less interesting and possibly more useful than Turner's work was the task accomplished by Mr. Glave, who was a veteran explorer, having served under Stanley in Africa. Mr. Glave was second in command of the Wells expedition in 1890, and had formed a pretty shrewd idea of the country and its possibilities.

Thus far, with the exception of the salmon which are canned near the mouths of the rivers, the only productions of Alaska have been the gold found in the placers, and the furs which are collected by Indian hunters. Gold exists in the gravel of nearly all the rivers of the territory, but pay-



Alaskan Indian Basket and Horn Spoon (Thlinkit).

closing; no other vessel could be expected that fall. For twelve long weary months those young men waited and watched, diverting their leisure by taking observations of sun, moon and stars, and calculating astronomical problems in that most desolate of all desolate countries,—the edge of the Arctic circle in winter.

> Ice seas and ice summits! Ice spaces
> In splendor of white as God's throne!
> Ice worlds to the Pole, and ice places
> Untracked and unnamed and unknown!
> Hear that boom! Hear the grinding, the groan
> Of the ice gods in pain! Hear the moan
> Of yon ice mountain hurled
> Down this unfinished world!

It was not till September, 1891, that a Revenue cutter hove in sight and relieved them from their boreal prison.

gold has chiefly been found in the confluents of the upper Yukon, especially in the one known as Forty Mile Creek, and the adjacent streams, and in the Pelly and its affluents. Here coarse gold is found in considerable quantities in the gravel, and a number of miners resort to the washings every year. They are said to clean up with an average of about $2,000 to $3,000 each, which is not bad for a season of from eight to ten weeks. The mines would be more frequented but for the want of transportation. To reach Forty Mile Creek from San Francisco the miner has to cover something like three thousand miles of sea and river travel. He cannot get into Behring Sea without

passing through Unimak Straits, which are in the meridian of 166 degrees, and the journey up the Yukon is frightfully expensive in the company's steamers, and never ending if the miner undertakes to paddle or pole his way up stream in his own or an Indian canoe. The only other road to the mines is by the Indian trail from the head of Lynn Canal over the Chilcat or the Chilcoot pass to the system of lakes in which the Yukon takes its rise, and thence down the Yukon past Fort Selkirk on the mouth of the Pelly to the washings. This is a terrible journey. The range which must be crossed is rarely free from snow, and the Indian guides are capricious, and not always willing to show the way. When they do consent to serve as bearers they charge forty cents per hundred pounds for a six days' trip and even then grumble at carrying much more than their own grub. Gold-hunting must possess rare attractions to command devotees under these circumstances.

The Alaskan miners generally come out by the overland route. After two months of exhausting work they pole their way up the Yukon to the lakes, and carry their food, gun, tools and gold over innumerable portages. At the head of the lakes they take the chances of finding an Indian who will pilot them over one pass or another, and carry part of their load to Chilcoot. It is no wonder that there are so few of them. The same difficulty stands in the way of the fur trade. The valleys of the upper Yukon and its tributaries are full of white, gray and blue foxes, wolves, bears, otters, marten and ermine. The skins of these animals are property; but the Commercial Company owns the only steamers on the Yukon, and no one outside of the company can get the skins out of Alaska for less than their value.

It occurred to Mr. Glave that the problem to be solved for the development of continental Alaska was one of transportation. It was evident that the place of the Indian must be taken by the horse. There was not a horse in the territory, and, so far as was known, there was no forage to feed one, if there had been. Mr. Glave had his own ideas on this point. He bought, at Seattle, four sturdy small horses, weighing about 900 pounds each, and inured to hardship. These

Alaskan War Knife.

Chilkâht War Knife.

he conveyed to Chilcoot, and with a partner and a few Indians started on a journey of exploration on his own account. He found, as he had expected, that, at a certain distance from the shore, there were numerous patches of soil abundantly clothed with grass, which was very nutritious. His horses devoured it eagerly, and

grew fat and frisky. He then commenced a pretty thorough exploration of the country lying back of the St. Elias Alps, and of the slopes of the mountain range which divides the shore from the Yukon watershed. He was independent of the Indian bearers, and was able, with his horses, to cover distances which would have worn out a traveler on foot.

He will probably some day give the world some account of the discoveries he made. Here it may be enough to say that he found the country lying north and northeast of the St. Elias Alps, which is a blank on the maps of the Hydrographic Bureau, supplied with a lake and river system like that of the province of Quebec. Lake opens into lake by a shallow stream, and river flows into river,—the whole emptying at last into the Gulf of Alaska. Not one of these lakes or rivers is marked on any map. Of the range running north of Chilcoot he was unable to make as thorough a survey as he wished. But he satisfied himself that, for purposes of travel and exploration, Chilcoot Pass is to be prefered to Chilcat Pass, which is the one generally traveled by the Indians and miners. He thinks, however, that a more convenient pass than either can yet be found. When it is the problem of transportation is solved. A line of wagon teams starting from Chilcoot village, where there is a salmon cannery and a few houses, following an easy trail to the mountains, crossing the pass, descending on the northern slope, and connecting at some point on Lake Bennett with a line of small steamers to be carried over the pass in sections, would be all that is required. By such a system passengers and goods could be conveyed from San Francisco to the gold washings in something like three weeks; and if the gold is as abundant as the miners say the output of the territory would soon assume serious figures.

Some of Mr. Glave's experiences with his horses were droll. Horses are terribly afraid of bears, and there is quite a liberal supply of bears in Alaska. Nature has provided horses for their protection against the enemy with a remarkably acute scent where bears are concerned. A horse will smell a bear farther than he can see him. When, after the party had made camp, and night had fallen, they were disturbed by frenzied whinnyings from the horses, they knew that a bear was prowling round, and kept a sharp lookout for a chance shot. The horses appeared to recover courage at the appearance of the men. They stopped their cries, and crowded round their human friends, rubbing their noses against them, and surrounding Mr. Glave in particular, as if there were safety in his mere presence.

One of his experiences has certainly never been paralleled. Horses have often been taught to walk on a narrow path where a single false step would be fatal. But he tells us that he taught his horses to walk on snowshoes. They were the ordinary Canadian snowshoes, oval in shape, and rather small. At first, the horses were awkward with them; but after a time they learned the trick of spreading their feet apart, and seemed to understand the purpose of the unusual hoof gear. Readers who live in parts of the country where heavy snowfalls are usual in winter might try whether their horses are susceptible of this branch of education. If they are not, it may perhaps be assumed that this was a case in which desperate straits required desperate remedies, and that the wits of Mr. Glave's horses were sharpened by emergencies.

Mr. Glave does not regard Alaska as a paradise. He did not find moose-meat as abundant as Mr. Turner did farther north. He relied chiefly on bear, and the meat of the hairy mountain sheep which used to be so common in Colorado. He does not seem to have found much trout in the lakes, though they swarm in the lakes of Canada; nor were game-birds abundant, except the ptarmigan, which is generally setting in the season when

Map of Glave's Discoveries and the New Davidson Range.

travelers visit Alaska. Wherever there is a stream it is full of salmon. The unfortunate fish endeavors to spawn as near the heads of the streams as possible, and often gets ashore in shallows and dies. But to mention salmon to an Alaskan is to insult him.

THE CHANNEL OF SANTA BARBARA.

By Juliette Estelle Mathis.

IT lies a liquid opal on the breast
Of soft Pacific seas; heaves when they breathe
With every surging sigh. The thin mists wreathe
Those fair encircling isles that guard with zest
This jewel of the wooing waves' bequest,
From out the depths where tempests rave and seethe,
To happy dwellers on its shores of rest.
Soft smiling skies their benisons bequeathe;
For Peace herself builds here her brooding nest:
Where way-worn pilgrims can at any time
Of their wan woefulness themselves divest,
Escape the summer scorch, the winter rime,
In slumber dream at their own will's behest,
Nor ask of God another perfect clime.

THE PROBLEM OF CHEAP TRANSPORTATION.

By William L. Merry.

THE question of cheap transportation is at this time attracting more attention than any other subject connected with the future of the Pacific Coast; and this may well be the case, since upon the cheap carriage of the products of our soil and industry to the world's markets depends very largely the prosperity of our people.

Railways have accomplished wonders in this direction, considering what was expected of them in years gone by; but this method of transportation has its limitations, even where competition exists. There are still instances in California, and not far distant from San Francisco, where horses and wagons are used for transportation because the work is done at less than charges for the same service by the railway covering practically the same route.

In the economy of modern civilization railways perform an important and necessary function. In the transportation of passengers, mails, specie and valuable perishable property they are indispensable. In a continental country like ours they have become an absolute necessity of our national life in time of peace, and equally so as a means of national defense in time of war. It has been remarked that no railroad manager knows how cheap freight can be carried by steam and rail until he tries it; of course, he would be foolish to try it unless it became necessary to do so.

The State of California has important waterways which are competent to provide for a great part of her internal transportation; but influences and public apathy have permitted these natural highways to become almost worthless in many instances. When the writer arrived in San Francisco in June, 1850, the vessel which brought him around the Cape went to Sacramento city to discharge, sailing up the river. Now, flat-bottom stern-wheel steamers can hardly make their way there during the dry season. The work of deepening and improving these internal waterways rests upon the Government of the Republic; and our people should persistently aim to secure appropriations for this purpose, and then to see that they are judiciously expended. Wherever there is interior water transportation freights are low; every one who has freight to transport is aware of this.

One of the most striking instances of the effect of cheap water transportation is found at the St. Mary's Canal, between Lakes Superior and Huron. The United States Government in 1852 constructed a canal there with one lock. This proving insufficient to meet the demands of commerce, another, and at present the largest lift lock in the world, was built in 1881, under the surpervision of Gen. Weitzel, U. S. Engineers, through which, during the seven months of open water in 1890 (234 days) over nine million tons of shipping were passed, making this the leading artificial waterway in the world, not excepting the Suez Canal.

During the year alluded to this lock was operated every day that the condition of the ice permitted; and the only delay occasioned by accident was a detention of a few hours on one occasion, occurring from the bad management of a vessel passing through. At the St. Mary's Canal forty-two steamers have been seen passed and awaiting passage; and in ten hours all had proceeded on their respective voyages, out of sight. The United States Government is now constructing still another lock with the assured fact of its necessity by the time it can be completed. So far from having proven an injury to the railways in the region alluded to, this cheap waterway has so developed

the industries of that portion of the lake region that more railroads have been constucted to accommodate the increasing land traffic and population; while it is a fact that thousands of tons of ore which have been passed through this canal for reduction at points south of the lakes would to-day remain undisturbed in their native beds but for the cheap transportation afforded by this water route. Railways would have been incompetent to deal with the problem of cost which controlled the question of mining and transportation of these ore bodies.

Leaving the question of internal transportation, we may consider the question of ocean carriage where it competes with railways. The following statement of comparative cost was furnished me by that eminent Civil Engineer, William J. McAlpine, an unquestioned authority on the subject.

COST OF TRANSPORTATION PER TON PER MILE, EXCLUSIVE OF INTERST ON CAPITAL.

1. Ocean, long voyages. . . .	1	mill
2. Shorter, or voyages of medium length	1½	"
3. Short coasting voyages . .	2	"
4. Canals (excluding ship-canals) . . . . . Each lock is equal to one mile additional canal.	4	"
5. Smaller canals with greater lockage	6	"
6. Railways with favoring grades, loads in direction of descending grades in excess of loads ascending	8	"
7. Railways, heavy grades and unfavorable tonnage, movement preponderating in one direction . . .	15	"
8. Railways of usual grades and average freight movement each way.	10	"

Since the above table was formulated the adoption of triple-expansion engines and other improvements have still further increased the disparity between the cost of transportation by land and sea. There has been improvement also in the manufacture of locomotives, but apparently not to the extent developed in the latest marine engines. The freight steamship *Cufic* makes the trip across the Atlantic in from ten and a half to eleven days, with 6,100 tons freight, on a coal consumption of about thirty-three tons daily. In ships of this character the discrepancy alluded to is much greater than above set forth in favor of water transportation. The new steamship *Nomadic* of the same line carries 6,800 tons freight, with still greater economy, although no precise statistics are at hand as to her performance. It is safe to assert that no sailing ship can compete with this showing on trans-Atlantic voyages, and it is questionable if they can do so even on long ocean voyages.

As an illustration of number six, on the Reading Coal Railroad the same engine exerts the same power to haul a train of one hundred loaded cars to market that it does to haul back the empty cars.

The above statement proves the fact known to all experts on the subject, that the expense of freight carriage on long ocean voyages compares with railway service in the ratio of one to ten; while, for practical purposes, assuming the cost of short voyages, the average carriage by water compares in cost with railway transportation in the ratio of one to five, or one to six. Consequently to water-carriage, internal and by sea, we must look for cheap transportation, independent of other limitations on railway carriage, easily recognized.

The modern improvements on marine engines, applied to iron vessels, enable them to compete with vessels propelled by sail alone, especially on short voyages, under ordinary conditions, the steamship being able to make at moderate speed about three voyages to one of the sailing ship in the same time, over the same route. It will be seen consequently that sailing ships have the best conditions for competing with steam on voyages of

great length,—for instance, around Cape Horn and the Cape of Good Hope in various directions. This is the last hold of sailing ships in competition with steam upon the great oceans, and even this is being successfully contested. It may be further remarked that the comparison of railway with water transportation already made, being exclusive of interest on capital, the railway is further at a great comparative disadvantage since the ocean highway needs no expense for maintenance. It is free to all, and the expense of improving internal waterways is borne by the people at large, through their Government.

What has been already written will illustrate why the people of the Pacific Coast of the Republic have always taken a deep interest in the interoceanic canal. While the construction of the Panama Canal was being attempted, there was an ardent hope for its early completion among our people, and when that hope was defeated by failure there, it is natural that the American Maritime Canal through Nicaragua should receive public attention and support, especially as its simplicity of construction and its practicability at a cost that will tax commerce lightly have been abundantly demonstrated.

Aside from this feeling there is among intelligent Americans familiar with the subject a deep-seated conviction that no foreign power should be permitted to control this great interoceanic waterway, which has been properly called by one of our great statesmen *a continuation of the coast line of the United States.* This is based largely on the fact that our greatest commercial competitor now controls the interoceanic highway leading to the Orient, and has already closed it to the commerce of the world when it suited her convenience, and would doubtless do so at Nicaragua under like conditions if that still more important waterway is permitted to be placed under her financial or political control.

As an illustration of the importance of the Nicaragua Canal to the commerce of the world the following table of distances will be of interest to the reader:

Table Showing Distances in Miles Between Commercial Ports of the World and Distances Saved by the Nicaragua Canal:

FROM	Via Cape Horn. Miles.	Via Cape of Good Hope. Miles.	Via Nicaragua Canal. Miles.	Distance Saved in Miles.
New York to San Francisco,	14,840		4,946	9,894
" " Behring Strait,	17,921		8,026	9,895
" " Sitka,	16,105		6,209	9,896
" " Acapulco,	13,071		3,122	9,949
" " Mazatlan,	13,631		3,682	9,949
" " Hong Kong,	18,180	15,201	11,038	4,163
" " Yokohama,	17,679	16,190	9,363	6,827
" " Melbourne,	13,502	13,290	10,000	3,290
" " New Zealand,	12,550	14,125	8,680	3,870
" " Sandwich Isl'ds,	14,230		6,388	7,842
" " Callao,	10,689		3,701	6,988
" " Guayaquil,	11,471		3,053	8,418
" " Valparaiso,	9.750		4,688	5,062
New Orleans to San Fr'ncisco	15,052		4,047	11,005
" " Acapulco,	13,283		2,409	10,874
" " Mazatlan,	13,843		2,969	10,874
" " Guayaquil,	11,683		2,310	9,343
" " Callao,	10,901		2,988	7,913
" " Valparaiso,	9,962		3,987	5,975
Liverpool to San Francisco,	14,690		7,694	6,996
" " Acapulco,	12,921		5,870	7,051
" " Mazatlan,	13.481		6,430	7,051
" " Melbourne,	13,352	13,140	12,748	392
" " New Zealand,	12,400	13,975	11,349	1,051
" " Hong Kong,	18,030	15,051	13,786	1,265
" " Yokohama,	17,529	15,040	12,111	3,929
" " Guayaquil,	11,321		5,890	5,431
" " Callao,	10,539		6,449	4,090
" " Valparaiso,	9,600		7,436	2,144
" " Sandwich Isl'ds,	14,030		9,136	4,944
Spain to Manilla,	16,900	13,951	13,530	431
France to Tonquin,	17,750	15,201	13,887	1,314
Hamburg to Mazatlan,	13,931		6,880	7,051
" " Acapulco,	13,371		6,320	7,051
" " Fonseca,	11,430		5,530	5,900
" " Punta Arenas, Costa Rica,	11,120		5,515	5,605

	Miles.
New York to East. Ent. of Nicaragua Canal,	2,021
Liverpool " " " " "	4,769
Hamburg " " " " "	5,219
Amsterdam " " " " "	4,994
Havre " " " " "	4,874
Cadiz " " " " "	4,220
New Orleans " " " " "	1,308
San Fr'ncisco to West Ent. of Nicaragua Canal,	2,776
Valparaiso " " " " "	2,518
Callao " " " " "	1,531
Portland " " " " "	3,219
Victoria " " " " "	3,428

Note.—The distances have been measured by customary routes most convenient for sailing ships and slow freight steamers.

It will be noted that the distance saved between San Francisco and New York is nearly equal to one-half the

earth's circumference at the equator. It will also be evident that the distances saved are considerably greater than the saving made by the Suez Canal, and also greater than any canal that can be hereafter built. It is hard to conceive the result of the opening of the great ocean highway upon the development of this Pacific Coast. Its commerce, agriculture, horticulture and its general welfare will surprise the student of contemporaneous history, when the limitation of present conditions imposed upon our people is forever removed. As compared with cost of transportation by rail on the ratio already alluded to, New York will be within six hundred miles railroad distance, and Chicago within four hundred miles! The railway systems, as in the case of the St. Mary's Canal, will be greatly benefited by the development of the Pacific Coast, resulting from cheap transportation for the products of our soil. Immigration will come to us without invitation, and production will no longer be handicapped by expensive freight. We shall no longer hear of thousands of acres of potatoes being allowed to rot because it does not pay to dig and market them, while the people of Europe are starving for the food of which we have a superabundance.

Cheap transportation is one of the problems of the age throughout the civilized world; but on the Pacific Coast it is the great problem which must be solved, a problem which presses upon our people for solution more and more as the years roll by. We are on the very outposts of the world's commerce. Westward stretches the greatest ocean on the globe; eastward our country spans the continent, with our centers of population over three thousand miles distant by rail.

Within a radius of thirty miles from the city hall of the city of New York—within this sixty-mile circle extending partly into the Atlantic Ocean—we find one out of fourteen of every soul in the United States! The same illustration, in a lesser degree, applies to all our large cities on the Atlantic Coast. They are the centers of consumption, and the great home markets we must reach or continue to suffer an arrested development.

Across the Atlantic are the nations of our own race, needing the products of our soil and industry; and we must "railroad it" over three thousand miles, and then cross the Atlantic to reach them!

All this will be changed when the canal is completed. New Orleans by sea in ten days, New York in eighteen days and Liverpool in twenty-five days easy steaming, at one quarter to three eights of a cent per pound,—that is what the Nicaragua Canal means to our people! Is it a wonder that they are urgent for its completion? In the movement of freight the general reader will underestimate the disadvantage of breaking bulk. While the cost has been somewhat reduced by modern appliances, yet the delay and damage to merchandise cannot be avoided. Nothing has so decreased the value of the Panama Isthmus route, as a competitor in handling freight, as breaking bulk and rehandling cargo in Colon, and twice at Panama. Our merchants have always regarded this as a great objection to the use of that route for freight. It is one of the great advantages of ocean transportation that breaking bulk is unnecessary until the voyage has been completed.

It has been the aim of railway companies to avoid this as much as possible by adopting a standard gauge, and interchanging cars; but on long lines of railway transportation it is not easy of accomplishment. If ever accomplished the baggage-smasher will find his occupation reduced to a happy minimum! There has been recently on this Coast considerable discussion of transportation via the Straits of Magellan to Atlantic ports by steam. There is merit in this proposition with modern freight steamers. If economically managed they will be profitable, on the basis of through freight alone, while the local

business of the way ports will largely increase the receipts of the line; and, if built as well as operated in San Francisco, the enterprise would be of great service to our city and State. Unfortunately, the excessive taxation of shipping under our State Constitution would necessitate the registry in some other State more friendly to the shipping interest.

When these steamships can be passed through the interoceanic canal the full solution of the question will have been attained; and this is a feature of the question which may be considered very favorable to the experiment. Even perishable freights, the products of our orchards and farms, can be successfully and cheaply carried by this route on refrigerator steamers, as is now and has for years been done with fresh meats from the Argentine Republic, Australia and New Zealand to Europe. The requirements of this class of service for vegetable products are much less rigorous than for meats, the latter requiring from ten to twelve degrees Fahrenheit lower temperature than fruit and vegetables. The cheapness of transportation by water is well illustrated by the demand in various parts of the world for ship canals. Manchester demands and is completing one at a cost of about $46,000,000, one-half of what the Nicaragua Canal will cost! Paris demands deep water at her doors. A ship canal is being built from the North Sea, and another at the Isthmus of Corinth, and others of less importance are projected. These are trivial in importance with the maritime canal of Nicaragua, which avoids the circumnavigation of half a continent, and discards the most tempestuous navigation on the globe!

The ocean is God's great highway,—nature's cheap transportation route,—an abundance of water but no watered stocks, no tracks to maintain, no switches to be left open,—its use free to all on equal terms!

Three-fifths of the globe is covered with navigable waters, affording a basis of cheap transportation, inviting the energy and the skill of mankind. The greatest nations have been and to-day are those that have used water transportation the most. Navigation has opened the path to empire!

The depth of water at the principal ports of the world has limited the size of ships, and the limit appears to have been reached. It is a striking fact that a ship drawing twenty-four feet of water is too large for three-quarters of the harbors in the world. The trans-Atlantic steamships have to await high water before passing the bar at Sandy Hook, and the San Francisco bar has spots on it with only thirty feet depth, on which deeply laden ships have struck repeatedly. While this limit exists as to size there is no known limit to propulsion. It does appear as if not much more can be expected from the use of steam, except possibly as a secondary power to produce electricity for the propelling of ships. In the development of electricity we may look for a motive power applicable to ocean navigation. Electric ships are almost a certainty of the near future. Electric launches are now at work afloat, and one of the large flour mills at Minneapolis has just introduced electricity as its motive power. Under any circumstances that can be foreseen, however, water transportation will continue to be the cheapest known to commerce; and in the development of maritime commerce San Francisco must make its mark in the history of modern cities; while the Pacific Coast of the United States will welcome the day when an American interoceanic canal opens a cheap transportation route to Europe and our Atlantic coast. Without injury to existing transportation interests, it will mark a new era in our prosperity,—a monument to American enterprise and a benison to mankind. Welcome the day! It cannot come too soon. The American flag shall go afloat once more, and San Francisco shall become one of the world's greatest seaports,—a distributing point for the commerce of the Pacific Ocean.

THOSE BELLS OF THE MATER PURISSIMA.

By Evelyn Morse Ludlum.

CAPTAIN SIMON MATTHEWS did sometimes quote the Bible, but always in a slighting, colloquial phrase, and merely to suit his private purposes.

For instance, "that . there apple business" was thrown at Josefa, his granddaughter, as an unanswerable reason why she should not be given the liberty of his orchard.

To irrigate, to spray, to anoint, to fumigate his few trees was the anxious delight of his life. He accounted for his enthusiasm over some fine persimmons in words that might easily have had a human application.

"I've watched that there fruit," he'd say, "pickin' its way along from a bud."

Josefa, too, or "Chepa," as she was nicknamed, had been "picking her way along" under his eyes.

She had pretty, caressing tricks, would lay her soft, round cheek down upon her grandfather's arm. But children do not choose convenient times. Old Matthews' attention was absorbed by a thousand trifles. If he was busy, the arm Chepa pressed remained as irresponsive as a bone under its flapping gingham sleeve.

Chepa had a feeling that her grandfather locked her out of his heart with the same key clicking so sharply in the padlock of his orchard-gate.

Indoors there was always her Aunt Porfirio, a representative of the Mexican element of Pueblo Viejo, where Matthews had been settled these thirty years.

The Señora secretly called the Captain "that robber." Had he not been ready to snap up a bit of property whenever her improvident countrymen were forced to sell?

With a man's dullness the Captain had never discovered this domestic enemy, or how Chepa's life was embittered by her.

She hated Chepa as the heiress of half the pueblo.

When Chepa's last and dearest playmate, Pablo McNamara, left the dead town to seek a livelihood elsewhere the girl would have run away from home; but, profoundly ignorant as she was, a vague terror always accompanied her speculations upon such a course.

At sixteen she had touches of beauty about her fit to dream upon: a rich sculpture of the lips, a dewy fire deep in her dark eyes, a glint of ravishing color where her somber hair ridged itself to the su-.

But she pondered too deeply about herself. There was much in her lonely habits to draw her to forsaken places. Such a place was one of the many ruins in Pueblo Viejo. "Mercedes' house" it was called, after a bride killed there by the falling of a tile through a weak place in the thatch.

The dwelling with all it contained had been superstitiously abandoned. Such rooms as were open had been robbed by Indians; but the death-chamber at one end of the row, hermetically sealed by the weight of the sinking roof, remained untouched.

A foot path leading from the *placita* to the little Catholic chapel on the outskirts of the town would have been shortened by going past Mercedes' house, but curved off widely instead.

A thicket of castor-bean and wild tobacco grew rankly around it. Chepa could be sure of solitude there.

One afternoon she fled to Mercedes' house in bitter revolt. She gave vent to her feelings with childish abandon by tearing at the braids of her hair, into which black strings had been tightly woven,—a hideous Mexican fashion.

She flung the string on the floor. Her two braids divided into six deeply waving strands; she attacked each strand, whipping it about. Her thoughts went even faster than her fingers.

"My grandfather will do what he pleases with his own," she declared, addressing her aunt, Luise Porfirio in imagination. "You cannot stop him."

Her loose locks spread gradually into a rich mass. She flung them around until her head swam and an electric life awoke in each airy filament.

The sunshine pouring down through the broken roof of the room where she sat took this magnificent mist of hair to itself, setting it afire.

Chepa was diverted from one cause of anger to another.

"Is this Indian hair?" she asked, in a transport of scorn and delight.

For the Señora Porfirio had not kept from her the ugly old rumor that her grandfather's first wife, her veritable grandmother, had been, not a Mexican woman, but an Indian squaw.

Little birds, accustomed to make free with Mercedes' house, could not wait for the disappearance of that glorified apparition.

Sitting silent on a rubbish-heap fallen in from the roof, Chepa felt a bird drop lightly down beside her.

She welcomed her visitor with a half hiss, half whistle, a charm she had learned from a Cahuilla Indian girl.

With a hop the bird took the edge of a tile-shard nearer to that mysterious summons. He twisted his head with insatiable curiosity.

As the hissing whistle went on inquisitive twitterings fell from ragged fringes of thatch overhead; excited shadows winked across the sunshine; bird after bird slipped down the golden chute and alighted.

In the midst of this growing flock Chepa was cautiously gathering up the hem of her gown so as to make a deep bag.

Whistle, whistle. A knot of snake-grass, stirred by heaven knows what, for nothing else was stirring, rustled with sound of life trailing by; but not a bird took fright. Whistle, whistle. A wild tobacco-tree whose top, dipping slenderly over the wall, dipped deep into the sunstream, sprang up suddenly, riding some flaw, and sprinkled Chepa and her entranced observers with sundrops. Whistle, whistle. Swiftly Chepa's free hand darted out to catch a bird, and returning, whish it into her improvised bag.

The other birds flew wildly away, but Chepa knew how to lure them back until her game-pouch was as full as she cared to have it.

What did she mean to do? Without doubt the Cahuilla girl had kept her captives for the spit.

Chepa stood up, gathering the skirt of her gown closer and closer. She talked to her prisoners aloud:

"You will never, never fly again, no?"

An ever-recurring "No?" from the Spanish tongue was shaded to infinite meanings on Chepa's lips, was deferential, gracious, wistful, from mood to mood.

"Only your feathers will fly when I pick them. One by one they will fly away to the top of the trees, away high up to the sun."

The imprisoned birds chirped frantically. Chepa was thrilled by the feel of their tiny feet kicking and scratching.

"But you will be dead, dead, dead."

With this dire repetition she gave the tumbling, palpitating mass an ecstatic squeeze,—and let her gown fall.

The birds rolled downward as one, but only far enough to catch their wings and whirr! they were slanting madly up the sunbeam, up, up, as if not to stop short of the sky. Chepa's very heart rose with them. She stretched up her arms as if to share in their glorious liberation.

Her rebellious mood had given way to an ecstasy of hope.

This hope had some foundation. A corporation of medical specialists were bargaining for a thousand acres of her

grandfather's land. They were to build a sanitarium for consumptives, to plant gardens and orchards in which patients might work out their own cure.

The Captain thought it a magnificent scheme. He had gone into it heart and soul, raising his price enthusiastically from day to day. He talked to Chepa incessantly, with flashes of youth in his weak, old eyes, of what he would do with changing, yet always fabulous, sums of money.

The birds were gone. Chepa sat down once more on the rubbish-heap in the midst of her red-gold bush of hair.

A dream of the future glittered and spun like the sunshine, adorably pure, laden with balm and ozone which men were coming to buy with her grandfather's land.

Out of this dream of the future, advancing to meet the self she was to be, came her lost playmate, Pablo McNamara.

He turned adoring eyes upon her.

"You are beautiful," he seemed to say, "and I love you."

A sound, not human, broke upon her ears with startling nearness. Just one thrilling note, and at an ominous interval another.

The bells of the Mater Purissima had begun to toll.

Ineffably clear, and right at hand, yet those tones had a singular sound of remoteness. No material interposition produced this effect. It was a spiritual quality, an aloofness, in touch with the dead pueblo, with its summer-burned hills and the seeping away of life.

Those vibrations as they widened out toward infinity took Chepa's soul with them. Her dream of the future passed into them as a breath passes into a wide-winged wind, and is lost.

She rose quickly and went to look through the great blossom-brushes of the castor-bean with an instinctive effort to lay hold upon some object that would bring back the present to her senses, bring back her hopes for the future.

Beyond the thicket, across a sun-baked open space, stood the little chapel. As through a mist she saw its side door standing open, its dark interior showing as a niche of shadow.

Rude figures which the sunshine could not enliven were crowding out of this shadow. One of them bore a tiny box decorated with gay tatters of cloth and paper.

"It is only an Indian baby," Chepa said, in a daze.

Behind the chapel rose up austerely the bare posts and cross-beam where the bells hung, or, as now, rolled languidly against the blue of the deep sky.

Seen through these posts as in a frame, immeasurable perspectives of wild land merged in the sapphire uplift of False Bay.

Upon this vacant water the afternoon was passing in flights of golden arrows.

Would those bells never cease! The priest who, only, had the right to ring them was tying back their consecrated tongues.

But whenever Chepa awoke that night their vibrations seemed to be still widening outward from her brain.

Chepa's heart was full of delirious expectations. The hours that separated her from a new life of travel and luxury, such as her grandfather had garrulously pictured, were on their way. At noon sharp, that very day, the great land deal was to be consummated.

At ten o'clock, giving up an attempt to spend the morning, as usual, in his orchard, the Captain had dressed himself with distinct reference to his dignity as a man of means.

The tails of his gingham shirt, wont to flow free, were tucked in His hair, ordinarily left to draggle in gray wisps over his shoulders, was drawn up and spread painstakingly thin to conceal an extensive baldness. A strong musty odor exhaled from a brand new silk handkerchief knotted about his throat.

Chepa, on tiptoe with exultation, announced to him constantly how many

more teams and horses were hitching in the *placita*.

He remarked with an air of pride:

"They've heerd of this big 'buy' all over the country."

The Señor Porfirio, who had taken the Captain's side against Luisa Porfirio and other mossback opponents of the sale, dawdled uneasily back and forth between his open door and the Captain's.

"You might spring an advance of five thousand on them," he advised at the last minute. "They would not let their scheme fall through for five thousand."

"Think ye? Think ye?" demanded the Captain, grouping and regrouping his wrinkles to the expression of varying shades of cupidity.

With the suddenness that surprises us in things long waited for, the great interview was actually taking place.

Chepa had fled to an adjoining room to listen. Her head and heart throbbed together with joy,—then terror.

Was that her grandfather's voice breaking out furiously?

"Who's made ye a better offer? . . . . Porfirio? He hasn't a acre in his own right. . . . . Forty dollars a acre? . . . . Take him up then, and when your improvements are in see if there ain't a right o' dower or trust deed, some d——d Mexican trickery, trumped up to drag ye into litigation?"

If Señor Porfirio had spoiled Captain Matthews' sale the Captain looked to a prompt return of the attention.

Those eminent specialists went elsewhere, leaving Pueblo Viejo to its old ways.

After such a terrible disappointment Chepa found the deadly monotony of things indoors unendurable.

A golden perch swimming in circles bounded by a glass bottle startled so stupidly at nothing. The round wooden clock on a bare wooden shelf was perpetually rolling over on its head and ticking placidly upside down. When Chepa was half mad with drawing threads from endless strips of *perfilada*, her aunt's favorite species of Spanish lace, she ran desperately to her grandfather.

She found him talking aloud to himself as he stooped over a pepper-vine.

She laid her cheek, pale with thoughts, upon the arm he needed to have free.

"What's the matter of ye anyhow!" he shouted.

She had startled him when he was deeply preoccupied.

"Let go, there! Eh, eh?"

Chepa had said something in a low tone which he could not hear.

He jerked his face up at her and instantly, in the intensity of a peevish inquiry, drew his toothless lips apart.

What has an old man of eighty to do with storms of feeling?

In the Captain's agitation he pulled off a green pepper and stood up fumbling at it and blinking his weak old eyes at Chepa.

"What's on ye Chepy?"

She tried to speak, but could only draw her breath hard.

The Captain's discomfort pushed him to seek relief in a general accusation.

"Weemen are al'ays hankerin' for somethin'"

"Grandfather," said Chepa with a deep, still gaze upon him, and a childish quiver of her lip, "could not a girl like me be a religious, a nun? Is it not good, no?"

How had the Captain's life prepared him to answer such a query?

"Who's been a talkin' to ye?"

"Nobody—sure, no. I think of it myself."

"I've got along all my life—and I ain't goin' to begin givin' in to such notions. You're your grandmother all over."

With the green pepper still in his hand he had disemboweled it and ate the carcass with a furious churning of the jaws. His eyes were redder than usual from the burning.

"But when she got one o' her spells o' hankerin' on I jest upped and off fer a week's huntin'. When I got

back she was pretty generally ready to take things as they come."

"Grandfather," said Chepa, looking at him as never before, with eyes that summoned him before the judgment-bar of a soul, "I have often thought to myself I would ask you, Is that story true that I hear? Was my grandmother an Indian?"

Her lip quivered, not childishly now, as she waited.

"Is it true, grandfather?"

He anwered her sharply, "You're a fool!" and turned his back on her.

As Chepa was going vaguely out of the garden she saw Pablo McNamara whirling away from the town in a jaunty dog-cart.

Dead grasses flickered ghost-like in the *placita*. The sunshine absorbed there by dark walls lay dimly as in an eclipse.

At a curbless well, covered by a lid let into the street like a trap-door, a superannuated horse was waiting for some one to give him a drink. He blew his nostrils at Chepa and pawed at the wooden lid.

She drew water and gave him to drink.

The chapel door was standing open upon the eternal shadow of its interior. A priest praying alone before the altar did not look up while Chepa stood about.

Behind the chapel those bells seemed to be forever waiting for youth to be dead and borne to its burial.

A second time that strange seizure! Staring up somberly at the bells, Chepa found the present with its despair trembling outward from her soul to possess that vacant landscape, the world, eternity itself, in ripples of solemn sound.

* * * *

A strange event had quickened Pueblo Viejo into galvanic semblance of life.

Chepa Matthews' sudden disappearance was associated with Pablo McNamara's equally sudden departure from that section of the country.

But Captain Matthews charged furiously upon all gossips with another theory. His "little Chepy" had been "inveigled away" from him by priests who wanted his land.

An Indian boy stoning birds near Mercedes' house heard a strange sound in there.

The house had always been haunted. It was long before men were led to search it.

A heap of stones and tiles rudely simulatiug a flight of steps led from the earthen floor up to the roof of Mercedes' death-chamber.

Looking through the ruinous thatch into the cell-like gloom below a sight to chill the blood was seen.

Rooted amid dust and cobwebs, her wild hair in a sunless mist, stood what had been Chepa Matthews. Her arms hung rigidly down in front of her; the hands, locked together, made one fist.

At odd moments, far apart, moved by some blind mechanism, her arms lifted toward her breast, the fist smote there, and a voice not hers, but hollow and vibrant, answered the stroke as a bell its clapper. One lamentable great tone, and at ominous intervals another and another:

"Oh-h! Oh-h! Oh-h!"

Then marble silence again. Devout Catholics saw how this affliction had come about.

Had not that robber of a Captain just "floated a claim" over the land on which the chapel stood?

To punish this heretic, those blessed bells had "gone to Chepa Matthews' brain."

Solemn groups stand for hours at safe distances from Mercedes' house to hear and shudder at those lamentable great tones.

"Oh-h! Oh-h! Oh-h!"

Thus ringing her own knell dies Chepa Matthews, aged sixteen.

No other knell is rung for her. The priestly guardian of the bells will not untie their austere sweet tongues.

Taken by a Kodak

POLO AT SANTA MONICA.

By G. L. Waring.

SANTA MONICA is the Newport of Southern California, standing on a high bluff overlooking the blue waters of the Pacific, guarded on the north by a ridge of picturesque mountains, the Sierra Santa Monica range, while to the south the land descends gradually until the cliff merges into the beach that circles away toward Redondo and the rest.

Two or three hundred years ago Santa Monica was a thriving Indian settlement,—the famous explorer Cabrillo calling it the land of smoke, from the many columns he saw rising. The land was not many years ago the ranch of Senator Jones of Nevada, and Colonel Baker of Los Angeles. First it began to be frequented by summer campers. The tents gradually increased, and finally a hotel was erected. More people came; the fine beach, the clear summer skies, attracted increasing numbers, until now we find Santa Monica a full-fledged watering place, with many attractive homes and a large and fashionable summer contingent. The Santa Monica summer is a series of absolutely perfect days with not a cloud in the sky, offering every inducement for the lover of outdoor sports. In July the tennis and polo clubs attract much attention. An afternoon at polo means a gathering of the clans, and society at Santa Monica turns out in force. The ladies take turns in serving lunch to the members and their friends; and a delightful afternoon is spent, the rush of the ponies, the spirited plays often made, evoking applause from the lookers on. Polo, for the benefit of the uninitiated, is very similar to hockey, but it is played on horseback, or rather pony back, the idea being to drive a ball between certain points and over a line, the struggle requiring the best horsemanship, pluck and nerve on the part of the rider. The game originated in India, where it is almost prehistoric.

The size of the ponies used is different in all countries where it is played; the standard in the regimental tournaments in India is thirteen hands, three inches; in England, fourteen hands; in America (I believe, but am not quite sure) it is fourteen hands, one and one-quarter inches. Of all standards the latter is the best, as a horse of this size is quite handy enough on a full-sized ground, and is better able, make and shape being equal, to carry a heavy man than a smaller animal of say thirteen hands, three inches, can be.

This, however, is about the limit of usefulness. The modern teams play under a combination, each man having his allotted place. The team is arranged generally as follows: The most responsible position is No. 4, or back. He has to save goals and also to make occasional runs himself, when No. 3 takes his place until he gets back again. No. 3 backs up No. 2

1

2

3

4

1. The Team. 2. A Young Player. 3. Nip and Tuck. 4. The Pony Objects.

and takes No. 4's place when necessary, and is always more or less to the front. No. 2 is the pre-eminent rustler of the team, being in the thickest of the fray and doing most of the hitting. No. 1, sometimes called the "flying-man," is continually making himself unpleasant to the other side, hustling, riding out, and hooking sticks, paying particular attention to the opposing back, and almost never striking the ball. He is a restless spirit, must be well mounted, ought to be light, is always on the go, and always annoying somebody. For a fast game of this kind,—when matches are frequent,—two or more ponies to each man are absolutely necessary, but it is quite possible to play a good ordinary kind of game with one, if the intervals are made long enough.

In Southern California polo has not yet arrived at this systematized state of perfection, principally for the reasons that there are not enough players and not enough ponies. The order of the day is more or less "gallery play," —a good hard work in any direction, to entertain the spectators and friends of the various sides.

The Southern California Polo Club at Santa Monica has completed the third season of its existence. It has always been exceedingly popular with the summer residents of the resort, —as on-lookers; but the difficulty has hitherto been to find men who have the leisure, or the riding capability, or the hardihood, or whatever it is that is necessary, to induce them to become active players. Were it not for the kindness of many who become non-playing members, and contribute to the fund, it would not be possible to continue, as the expenses of caring for the ground are heavy. The honor of

G. L. Waring on La Pulza.

starting the club is due to Mr. Edmonds, of Los Angeles. His recounted deeds of valor with the polo-stick in many lands fired an enthusiastic band to the pitch of obtaining a ground (kindly leased by Messrs. Jones & Baker, the local magnates), and scouring the country for ponies.

The ground—though too small—is very nicely situated, being bounded on the west side by a plantation of gums and pepper trees. An agreeable shade in the afternoon is thus provided for the spectators, and a screen presented to the prevailing westerly winds.

Viewing it as played at Santa Monica at the present day, it is very difficult to realize the wild and lurid go-as-you-please scramble that at first pertained. Interminable scuffles, amid clouds of dust, resulted in hard knocks for the ponies; but the enthusiasm was undamped, though it became evident that the ground could not long remain in the same condition. A watering cart was accordingly bought, and with the improvement of the ground a corresponding improvement in the play was soon noticeable.

During the first season the club had an unfortunate set-back. It undertook to give an exhibition match at the race-track at Los Angeles, with a view to popularize the game, and a good deal of money—not very plentiful at the time—was spent in band, advertising, posters, and other luxuries. A small admission fee of twenty-five cents was charged to defray these expenses; but the public did not assemble in their thousands,—as was expected, — to witness the match. Sooth to say, the spectators were chiefly stable boys, who—tell it not in Gath—were rather inclined to guy the game.

Goal.

The loss of money at a critical period was serious; but Mr. R. P. Carter, now a member of Madam Modjeska's

Company, gallantly stepped into the breach, organized an amateur theatrical company, gave a performance at Santa Monica, and the visitors at that place nobly responding, the prostrate club was again set upon its legs.

During the second season combined athletic sports and pony races were held on the grounds, and were repeated on September 8th and 9th of this year on the polo ground and the new race-track.

Good ponies are very hard to find. There are plenty of them tough enough and strong enough, but as a rule they are sadly lacking in quality, and are consequently slow.

A Run.

At first sight it would appear that a Mexican broken cow-pony would be just the thing for the purpose, but this is really a debatable question. In my humble opinion, a horse broken to a severe bit is afraid to face it, and consequently goes in an uncollected manner.

He may certainly turn quickly, but he is liable to do so on his shoulders, instead of having his hind legs under him.

This is not only dangerous,—as likely to cause a fall when going fast, —but is also tiring to the animal as well as rough for the rider. Besides it is nearly impossible to regulate a horse's speed to nice gradations (which is very necessary in polo) unless he will take some hold of the bit.

A hackamore-broken horse is continually poking his nose in the air.

On the Santa Monica ground, which is smaller than the regulation size, being 190 yards long, instead of 250 yards, a very fast pony is not absolutely necessary, but they must be able to run well.

Quickness at turning, good temper and absence of fear are the main qualifications; and, out of the many that have been tried since the beginning of the game, only about three can be said to thoroughly meet all requirements. The laudable desire of ponies to get into the game while being held, that we have heard of in other climes, does not seem to actuate the Californian mustang. In fact, if he shows any anxiety at all on this subject, it is to get as far away as possible from the whirling stick and flying ball.

The Santa Monica ground presents a spirited appearance on play days. Generally there is a cool breeze blowing from the sea; and the guests from the hotels and the casino with their carriages form an inclosure about the area eager to applaud the fine plays of their friends. The ponies appear to know that something more than usual is expected from them, and are full of life and spirit. Some are being walked

up and down by grooms, others are being inspected by their owners, who indicate their fine points and tell stories of their deeds in former seasons. Finally the bell rings, and the sides take their places; and at the word many hoofs strike the hard ground. There is a rush of forms, and a fleet pony dashes to the front, while another from the opposing forces is coming on at equal speed. The fair spectators hold their breath, as it appears that both horses will meet in common ruin; his foot against the pony he lifts and is up, springs to the saddle, and by a trick of fortune is now speeding along with the ball before him. Victory is within his grasp. The final blow is about to be struck, when like a whirlwind down comes an opponent, who locks sticks with him, while another player sends the ball whirling in another direction. Now the players are bunched all together; and the sharp clicks of the sticks, the stamping of feet, the hurried rushes and bending

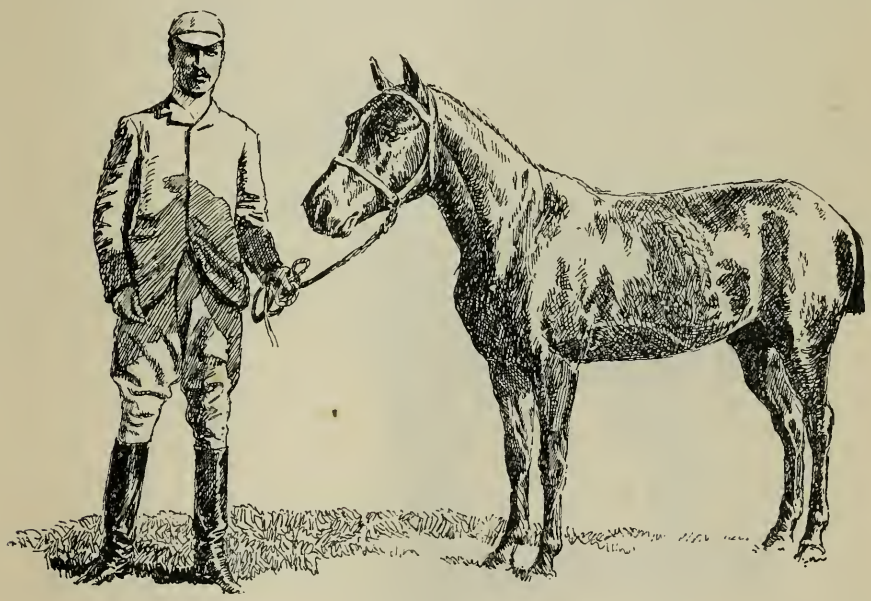
W. H. Young on the Marquis.

but one is ahead, and by a deft stroke the ball goes whirling down the grounds despite vicious blows at it all along the line. Any one who has been in the midst of a football rush can imagine the excitement of trying to produce the same results, mounted upon firy ponies. The latter are of as many minds and dispositions, and there is many a slip. Here two ponies come together, and one goes sprawling on the ground. The rider is caught for a moment, but by deftly putting forms tell of a heated struggle. Then some lucky pony kicks the ball away, a rider sees it, and again the field is away. This time it is a race, with the entire field to win who shall get it. One pony evidently has determined to get it, and with a rush carries his rider well ahead of the rest. The stick whistles through the air. A sharp click, heard distinctly over the field, and a band of hard riders pull up at the goal just in time to see the little object go over the line amid the applause from

the assembled guests. Half an hour or so is now given for rest. The ponies are unsaddled and blanketed, and walked up and down; while the savory punch-bowl and luncheon invite the players, and so goes the game. The play is diversified by various experimental runs. Riders run at the ball at full speed to see how far they can send it; while at other times obstacle races and various feats of skill are given of interest to players and spectators.

played ; and though they commenced during the first season, and have been hard at it all the time that play has been going on, they are both now perfectly sound, having each carried about 180 pounds. If Cigarette were faster and rather larger she would be a perfect polo pony.

Mr. Proctor's Rex is a dark chestnut, good-looking stallion, not tall but thick through, is fast and the toughest of the tough, having been played since the commencement and



J. B. Proctor and Rex.

To criticise the style of the players would be invidious; but as the ponies will not be able to read this article, and are well known to all lovers of sport in Los Angeles County, I think I may venture on a short description of them. The best one now playing and the truest is Captain Bolton's Cigarette, a small, wiry, light, well-bred looking roan mare. For the benefit of the advocates of big bone it would be as well to state that this pony and Santa Clara have the smallest bone of any ponies that have

in the most energetic manner. There is a legend that he came from Texas.

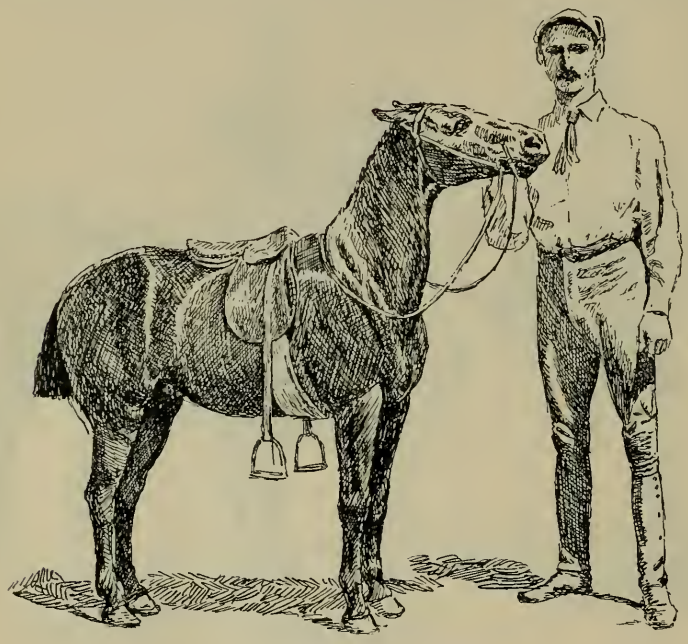
Mr. Woodhouse, the honorary secretary, official measurer, and controller of the water-cart, has had several animals. Kitty, an old brown mare, formerly chore-pony at a livery stable, is, or was,—for her polo days are over owing to the encroachments of age and failing fore-legs,—by far the best. She was well up to weight in her better days, fast for a spurt and perfectly true and reliable. Miss Jummy began well but eventually took a

violent dislike to the game and refused to play at all. Old Bessie was as true as steel but as slow as a man in boots. Black Bess, Bronco, Buckeye, Billy and others have either died or been found wanting, and so passed out of the polo circle.

Mr. Young had a large, roan pony fully up to the standard height called the Marquis. He was of homely appearance, but was pretty fast, quick and good. Santa Clara is a thoroughbred mare, bred for a race-horse, but being too small for that purpose was relegated to the polo-ground. She is very fast, exceedingly handy, but rather a puller, and not quite as true as she might be. La Pulga is a strong, good-looking, fast mare, that might with advantage take to the game a good deal better than she does.

Mr. Carter's Pepita was—she plays no longer—phlegmatic and powerful, but fast when roused up, and fairly good. Mr. Haigh's gray Buck, though slow, can keep it up all day, and is a true and patient animal. Mr. Allen's Fanny is a very nicely shaped brown mare of good size, and fast, but does not take as kindly to the game as she used to, while Mr. Machell's Tom Tit is a sturdy small pony, and stands a deal of work well. In the racing department Santa Clara has never yet been beaten by a pony. La Pulga also is very fast. Rex, Pepita, the Marquis and Fanny are about on a par and go a good pace.

The principal players at the present time are Messrs. J. B. Proctor, E. Woodhouse, W. H. Young, J. Machell, J. Haigh, Templar Allen, G. L. Waring and Captain M. Bolton. From these it would be possible to select a team of four that, mounted on really good ponies, would render a good account of itself in good company. The officers for the present year are E. Gorham, Esq., president; H. A. Winslow, Esq., vice-president; E. Woodhouse, Esq., secretary-treasurer; J. B. Proctor, Esq., captain, and the officers and W. H. Young, Esq., and G. L. Waring, Esq., executive committee.



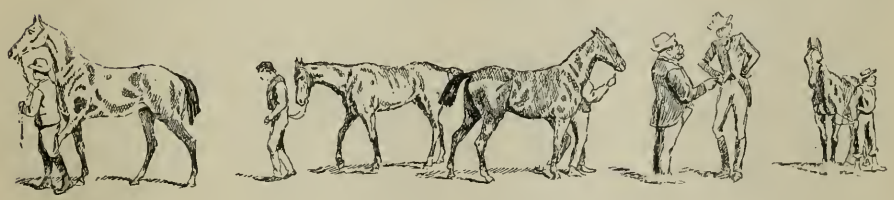
J. Machell and Tom Tit.

Polo is a game that necessitates skill, nerve and dash. It is better for the spectators than baseball, football, lawn-tennis or cricket; and for the players it is the most exciting of all outdoor games, though not the most difficult to attain proficiency in. To play lawn-tennis or cricket really well it is necessary to begin as a boy; but any one who has used his right arm in any game and can ride may expect with some practice to play polo fairly well, and with more practice, if he be of the right temperament, to eventually become an expert. It is a game eminently suited to California, where there is so little rain to interfere, and where it can be carried on on a cheap basis. The chief expense is the watering of the ground; this must be done every time a game is played, as dust spoils the game by obstructing the view, and the surface of the ground soon becomes cut up and uneven unless this is attended to. A full-sized ground, where water can be obtained close at hand, can be thoroughly sprinkled enough for one afternoon's play for seven dollars.

This is the main item of expense. The cost of balls is not large; and each player will probably require three to five sticks a month according as he is lucky or not. These cost about two dollars and seventy-five cents each. A pony can be well kept at Santa Monica for six dollars a month.

It is a pity that there are not more clubs in Southern California, so that inter-club tournaments could take place. In the winter months Pasadena, Riverside and Santa Barbara, and Monterey for San Franciscans, could well support a club each.

In the conclusion it is a game that should be played only by those who have the feelings and instincts of gentlemen, as rough, unmannerly play is not only dangerous and cruel to the ponies, but it also spoils the game. It is quite possible to play hard and ride out as much as desired without causing any unnecessary danger, if the rules are attended to.



An interval

AT THE DRY TORTUGAS DURING THE WAR.

A LADY'S JOURNAL.

(Commenced in January number.)

[The history of the late war has been well described in various publications, but that portion relating to the famous Dry Tortugas prison, where thousands of men were kept during the war, and where those connected with the assassination of President Lincoln were confined, has never been described, yet the events are now of great historical value. The island upon which the great prison was established was a sand bank comprising but thirteen acres,—one of the last of the keys representing the end of the great Florida reef. For seven or eight years a lady, the wife of one of the surgeons, lived in this isolated spot and viewed all the incidents from the appearance of the first war cloud until the declaration of peace. The following chapters were not written or intended for publication, the events being jotted down simply for friends in the North; and THE CALIFORNIAN has been enabled to give them to the public in a series of chapters, believing that many are of historical interest and value, and also as showing the singular life of a lady in one of the most out-of-the-way spots in this country. This chapter is illustrated with a view of the headquarters at the great prison, one of the largest forts on the western continent.—EDITOR.]

THE destination of Captain Meigs and his party was a secret. It naturally aroused much conjecture on our little island; but we soon heard that the expedition had arrived at Fort Pickens, and that the object was to reinforce the garrison there. Even this movement did not convince our genial commander, Major Arnold, that war was imminent; yet with the vigilance of the soldier he prepared for the struggle that was to come, and began a series of fortifications that would have made the island a difficult place to capture. In fact, fully armed, the Dry Tortugas was almost impregnable; and everything pointed to the conclusion that the garrison would soon be in a position to defend itself against the world. The outside fortifications began with a breastwork on Bush Key, which hitherto had been the home of the sea-gull. The trees were to be cut and made into facines. Sand Key was to have a battery; and finally we learned that the fort was to become a naval station, vessels being on the way with stores.

Key West was now under Federal authority. New officers were appointed, to command the four hundred men on the ground; and we were assured that more would be sent if necessary. I asked Major Arnold if it was in fear of a foreign power that all this preparation was being made, as no one thought England or France would acknowledge a Southern confederacy.

He replied that possibly the Government thought that, in case of war, Spain might stand ready to pick up what spoils could be easily taken during a national explosion.

Lieutenant Morton now went to Key West for shovels, wheelbarrows and workmen. He had sent to New York for three hundred men, and some sappers and miners, who came on the last boat; and work on Bird Key began at once.

One day the men discovered a large cannon several feet from the shore in very good condition. It had been spiked, and had the English arms and date of seventeen hundred on it. We invested it with a romance at once, probably not far from the truth, as it belonged to the pirates; who must have been followed, and who had spiked and thrown it overboard to prevent it from falling into the hands of the enemy.

These islands were known to have been the resort of Spanish buccaneers years before. Captain Benners, the lighthouse keeper, found several thousand dollars in Spanish doubloons on

East Key, ten miles nearer Key West; and many stories were told of other finds.

It was summer; the men worked bravely in the broiling sun. The mercury stood at 91 degrees on many days; yet no case of sunstroke occurred, but other troubles came. The men began to have scurvy for want of proper food, and some had to be sent North.

The day we received the news of the attack on Fort Sumter was a memorable one. The officers were demoralized; for none of them, I think, had fully realized that the end was to be war, and the country the scene of bloodshed. They felt as restless as though they were imprisoned. All wanted to go to the front, and share in the glory and excitement; and it certainly was very trying to remain here doing nothing but guard a fort that now would not in any probability be in danger of an attack, so well fortified were we.

They told us that if there should be an attack the women and children were to be put in an empty reservoir under one of the bastions farthest from the enemy; and our plans were all laid, and rehearsed by the children day after day.

One day, after having been to Bird Key, we saw a very dense smoke on the horizon, which was moving slowly along. Speculation was rife at once. As we came up the walk Major Arnold called from the upper piazza to know if we were going out on the water again, as sentinels were posted on every side. The large guns were loaded, and two brass field-pieces in the gateway were also prepared, with the men ready to use them at a moment's notice.

My house boy told me that there was a rumor that the fort was to be attacked, and that a workman, an American lately engaged, who came from Havana, had been arrested as a spy but that they were not able to prove anything against him: a sample of the rumors in our little settlement.

The next morning the steamer was still in sight, going back and forth in a mysterious manner; and we could see that some sailing vessels had joined her. They disappeared before night, however, and we heard nothing from them; but later news came that the Confederate yacht *Wanderer* was out as a privateer by permission of President Davis; so we concluded that it was she, while the steamer might have been a convoy.

One day I suddenly heard the sentinel on the east face shout, "Corporal of the guard, post number one," in a shrill, excited tone. This was taken up by the next sentinel, "Corporal of the guard, post number one," still another repeating it, until the word reached the guardhouse. In a few moments a corporal went up the walk on the run, and I soon saw him on the fort; then the men began to go up; and soon we were all on the ramparts. Away on the horizon was a steamer headed for the channel. The suspicious black smoke was rising every moment. She evidently knew the channel.

My husband was health officer; and I soon saw his eight-oared barge pulling across the Long Key reef with the officer of the day. It was their duty to intercept the vessel off the second buoy. On came the steamer, a black, suspicious-looking craft, still showing no signal; and such headway did she make that she passed the Sand Key buoy before the barge reached her, and steamed on rapidly, paying no attention to their signals, heading now for the inside buoy. The long roll was sounded, the men fell in; and in a trice the big guns were manned, and with a roar the first gun belched forth its warning from the Dry Tortugas. A solid shot whistled across the bow of the incomer so near the cutwater that half an hour later I heard the Captain say: "Well, Major Arnold, I must compliment you on that shot. Three turns more of our wheels, and you would have blown my bow to splinters."

The steamer was a transport in need of coal; and its officers had simply

misunderstood the signals. They brought no news, except that the Spanish government had refused to admit vessels flying the Confederate flag into the harbor of Havana, which was in a measure comforting to us.

The following day the man-of-war *St. Louis* came in, her officers adding much to the social life of the Key.

During their stay Lieutenant Morton invited us down to see the oath of allegiance taken by Captain Wilson and the crew of the schooner *Tortugas*. It was quite an impressive ceremony, after which they were provided with two brass guns and small arms; and we called her our gunboat.

The coming in of so many steamers relieved somewhat the monotony of our lives; yet we did feel very far away, and the officers were still impatient at the isolation.

The *Tortugas* now went out as a gunboat, flying the stars and stripes, saluting it with thirteen guns. Captain Wilson evidently enjoyed his command.

A steamer came in with news to the eleventh, ordering the *St. Louis* back to Fort Pickens, and taking all the sand bags we had made to stop the open spaces in our second tier of casemates, as we had no fear of needing them then.

Anxiety continued to increase. Mutterings of war were heard on every hand. Neither side seemed likely to yield; and, if an agreement could not be brought about, it must inevitably result in that most horrible of all wars, a civil one.

The Southern States were arraigning themselves, one after another, like line of battle ships bristling for an engagement; and every man who had lived in any of these States immediately felt that his duty called him to stand by it, regardless of the Constitution.

One officer sympathized so strongly with three States that he had a fever of secession as each one threw off the yoke of allegiance to the Union; but he managed to stand by the colors he was educated under until the last of the three fell out of line, when he sent in his resignation, and became a noncombatant.

These were sad days, though sadder ones were to follow; yet I think no one dreamed that if war came it would be a long one. A few months would settle the difficulty. I think that was the feeling of all the older officers.

The population increased so rapidly that in June, 1861, the census was taken, showing that 550 souls were living on this sandbank of thirteen acres, too large a number we deemed for safety, little thinking that before long Fort Jefferson would be the home of several thousand men.

By enforcing a strict quarantine my husband kept the spectre of yellow fever, that was in Havana sixty miles away, at bay through the long summer, though the strict confinement told upon us in other ways.

In June the gulls always came in thousands to lay their eggs on Bird Key, the season being in the nature of a festival and feast for us, as we made up egg-collecting parties. The eggs were enjoyed by us, as they were luxuries here. The quantity of eggs may be imagined when it is known that we could hardly walk in some places without stepping upon them, and would often take away a flour barrel full of the speckled beauties.

This year the men had taken possession of and were engaged in throwing up a battery on the island; and we were interested to learn whether it would result in the birds seeking some other place. At first they were shy and distrustful; but when they found that the soldiers did not disturb them they took possession of the old places, and could be seen from the fort hanging over the Key like a black cloud, while near at hand their cries drowned the voice.

On the night of the 1st of July we saw the comet of '61 from the top of the fort. Its appearance was sublime, as it extended over nearly half of the heavens. The colored people were inclined to be superstitious; and

many wondered if the world was not coming to an end.

On the night of the 4th of July Captain Morton, whose nervous energy never seemed to flag, took us to Bird Key in the barge, with Chinese lanterns at the top of each of the two masts. The black boys accompanied us with their banjos and guitars, and made very sweet music. There we built bonfires and displayed some fireworks, celebrating our Fourth on this little coral island in the Gulf.

The afternoon had its excitement in the arrival of the steamer *State of Georgia* with two companies of Wilson's zouaves. It was supposed they were sent here as a safe place to drill them, as we had all the troops that were needed.

On the seventeenth a bark from New York came in, and also the steamer *Vanderbilt* from Fort Pickens, bound directly for New York. We concluded to avail ourselves of the opportunity of going North on a visit, and sailed on the evening of the 20th of July, leaving the fort with the most beautiful sunset for a background, the gorgeous colors streaming up behind, the fort looking almost as though it were going to be consumed in the blaze of glory that covered all that part of the sky. It was so impressive that we watched it from the deck of the steamer until the fort stood grim and dark against the sky.

We were four days going to New York. The steamer carried but nine passengers, officers who had been promoted and were going to join their regiments, all eager to go to the front.

The captain of the steamer had some fear of the *Florida*, which was cruising in those waters, and watched the horizon for black smoke. He kept one engine banked, as the steamer was short of coal, until we were up the coast beyond North Carolina, when he put on all steam, and we almost flew through the water.

When we took on a pilot off Barnegat we heard of the first Bull Run disaster.

During our stay North we visited Captain Woodbury in Washington. What a contrast to our visit of less than two years before, when the grass was literally growing in some of the streets; and it seemed a sleepy, restful place, where people took life calmly and enjoyed it. Now the streets were deeply cut by heavy wagons transporting guns. Everybody was rushing about with an excited air. Most of the men one met on the street wore uniforms significant of their duties; and we heard little talk beside war and rumors of war.

While here we also met Captain Meigs and Captain Craven, the latter there awaiting orders.

One day during our visit my husband came home and reported that he had seen the smoke of the battle of Munson's Hill from the top of the Treasury,—a fact which brought home the reality that the seat of war was not far from the National capital. My husband felt that his services were needed at the fort, as he was acclimated. So our visit was cut short; and we were soon on our way back to Tortugas, on the old transport *Philadelphia*, which we afterwards learned had been condemned.

We left in a driving snowstorm, and lay off Fort Hamilton until morning, when we took on board Major Haskins with one company of troops for Key West, and some officers for Fort Pickens. My sister and Mrs. C——, who was returning from a summer spent North, were the only ladies besides myself on board.

The old *Philadelphia* was not the most reliable ship, but she carried us safely, and did much more duty even after she had been finally condemned.

The morning before reaching Key West Major Haskins surprised us all with *reveille*, which sounded very cheerful in the still morning air. Very soon afterward we met the *Rhode Island*, which hailed us and sent a boat with her pilot, and took letters from us for New York. She had on board an officer whom we left at

Headquarters at Fort Jefferson,—Dry Tortugas.

Tortugas; and they also gave us the news of the bombardment of Fort Pickens, which place the steamer had just left. It was quite an excitement; for, although she was not more than one hundred yards distant, the little boats in going back and forth were entirely hidden by the waves.

The next morning found us anchored safely in Key West harbor, where we spent the day and left my sister with Mrs. C—— in her lovely home under the cocoanut trees.

The next night at ten we were outside the buoy at Tortugas, where the captain of the steamer threw up rockets and burned blue lights; but no pilot came out until morning, when we were soon anchored opposite to the sally-port, where Captain Morton met and escorted us up to our old home.

There had been a great many changes during the few months of our absence. Major Arnold had left; and most of the troops had been exchanged; but one great pleasure I found on my return was in the addition of three ladies to the garrison.

I presume it will be difficult to realize fully the isolation of that kind of fort life,—even a great contrast to a life on the plains miles away from any town or ranch. We were in an inclosure of thirteen acres sixty miles from Key West and eighty from Havana, with nothing outside of the towering brick walls to walk on but a narrow seawall inclosing it, sixty feet away,—wide enough for two people to walk, with water on each side.

On the plains, if one wearied of their surroundings or were tired of their neighbors, they could ride out of sight, returning when they chose; but here it behooved people to keep up amiable relations with their surroundings, as they could not get away from them. I have been told by people who have crossed the plains, with parties who were most desirable companions for the first few weeks, that the isolation and constant companionship of the same persons day after day changed them entirely, developing freaks of nature unknown to them before, which proves that a change of scene and people is good for human nature generally.

This life was certainly a test of our dispositions in that respect; for we were entirely dependent upon ourselves for all our pleasures, and, I might almost say, comfort, for a want of harmony very materially interferes with that.

Captain Morton's assistant had brought his wife with him; and they formed a mess in the quarters we occupied before going North. He gave us the choice of remaining with them or taking a small house across parade which the Engineer Department was building. We accepted the house, remaining with them until it was finished.

The newcomers were Mr. and Mrs. J——, Mrs. R——, who had been an army lady, and Mrs. H——, whose husband had been promoted from the ranks. With Mr. Phillips' family, consisting of a wife, son and two daughters, and with the wife and niece of the lighthouse keeper, we could gather quite a party of ladies, making us feel much less out of the world; and we soon became quite sociable.

The increase of people brought many necessaries which added to our comfort, although everything was expensive: Butter fifty cents a pound, lard twenty, and other things in proportion.

The Government began to tax all salaries exceeding eight hundred dollars, and many other things, which, with some whose patriotism was exceedingly sensitive when it touched their pockets so directly, caused no little grumbling. Later in the season, while my husband was on the mainland, he came across a camp of irregular Florida cavalry; and the following lines in pencil were handed him, nameless as to authorship; but whoever it was evidently felt that the cause

hardly warranted all he was going through:

We are taxed for our clothes,
Our meat and our bread,
On our baskets and dishes,
Our tables and bed.
On our tea, on our coffee,
Our fuel and lights;
And we are taxed so severely
We can't sleep o' nights.

And it 's all for the nigger!
Great God! can this be,
In the land of the brave
And the home of the free?

We are stamped on our mortgages,
Checks, notes and bills,
On our deeds, on our contracts,
And on our last wills!
And the star spangled banner
In mourning doth wave,
O'er the wealth of the nation
Turned into the grave.

And its all for the nigger, etc.

We are taxed on our office,
Our stores and our shops,
On our stoves and our barrels,
Our brooms and our mops,
On our horses and cattle;
And if we should die
We are taxed for our coffins
In which we must lie.

And its all for the nigger, etc.

We are taxed for all goods
By kind Providence given;
We are taxed for the Bible,
Which points us to Heaven:
And when we ascend
To the Heavenly goal
They would, if they could,
Stick a stamp on our soul!!

And its all for the nigger!
Great God! can this be,
In the land of the brave
And the home of the free?

Water was now a great consideration, with so large a garrison; and at this time the men were put on an allowance, it became so low. Fortunately we had the unusual occurrence of some hard rains and thunder-storms; and for a time the supply was sufficient.

All events were of consequence and even of importance to us, and without realizing that it helped to break the monotony of what would have been otherwise a very monotonous existence.

The building of the works had been suspended on the other Keys, as the feeling of security increased with our reinforcement of guns and troops.

We had a little excitement in the form of a suspicious-looking schooner that came in ostensibly in distress. Both topmasts were gone, and she was nearly out of provisions and water. Her captain said they ran the blockade; but they had secession passports, although they claimed to be fleeing from the rebels. Colonel Brooks ordered Captain Morton with four soldiers to go on board, after the captain had been put in confinement. They found two ladies and other passengers amounting to twenty people. Captain Morton said the ladies gave him their keys so pleasantly it made him quite ashamed of his duty. One trunk was very nicely packed with a hoop-skirt and a revolver in the bottom. They found the log-book notes very suspicious, besides their passports; but Colonel Brooks allowed them to go to Key West, sending a schooner after them to see if they went there or to Dixie again.

The command at that time consisted of one company of regulars under Captain Langdon, and four companies of volunteers,—Wilson's zouaves. Some of the latter were without doubt very questionable characters; and, as the officers had been chosen from among themselves, the matter of discipline had been so far rather a surprise to us.

There had been an order issued at headquarters that any soldier found intoxicated would be tied up. There had been no trouble, as in such isolated places that could be more easily managed; yet the fishermen sometimes brought whiskey and smuggled it ashore, selling it to the men. But a vessel came in with stores; and some whiskey was carried to the commissary for safe-keeping while the soldiers were unloading the cargo.

We were going out rowing about half-past seven, when we heard a gun fired by one of the sentinels. Some men were seen running away with whiskey, the result being that on our return an hour later, as we came through the sally-port, a man was being tied up. As the officers with

us passed him he called out, "Tie me tighter."

We had been in our quarters but a few moments when there was a great uproar, a call for the guard, screaming, shouting and running from all parts of the fort toward the guardhouse.

Captain Morton, who had walked up to the quarters with us, hurried down, fearing there might be trouble with the engineers.

By that time we heard the call for Company M, the regulars; and the noise, which was still increasing, was most terrifying. We could hear the men loading their muskets, as they were in the casemates near the house, and saw them go down "double quick." Then followed more derisive yells, and for a few seconds it was quiet. We in the quarters knew nothing of the cause of the disturbance, as no one had returned. They left us with orders to stay indoors; that there would probably be no trouble. The order we could obey; but the statement we felt, with pale faces I dare say, was to be proven.

My husband had left us at the wharf to visit his hospital outside. A detachment came "double quick" to the bastion at the other corner of the quarters, bringing out a field-piece, which in a few moments was put in a position to command the building occupied by the volunteers; and in a short time Captain Morton returned, telling us that the company in which the man belonged who was tied up rushed in and cut him down in defiance of the guard, then ran to their quarters for their guns, and were in open mutiny. But by that time Captain Langdon had his guard ready, and told them if they advanced he should give the order to fire. They hesitated, held a consultation among themselves, evidently realizing that the Fifth Artillery was not to be trifled with, and finally retired to their quarters, there calling out for all or any one to come in at their peril. After awhile some parleying was done; but they refused to come out and deliver up their guns, and were still abusive, calling upon any one who dared to come in, and they would fight him.

Colonel Brooks was a short man and rather slight, but not wanting in bravery. He handed his sword to an officer, and unarmed walked into the building,—full of infuriated half-drunken men,—an act requiring no small amount of courage; for I doubt if you find in any volunteer soldiers that instinctive fealty to the officer which seems to be natural to the regular troops. On the other hand these rough, reckless men had something in their natures that immediately responded to so bold an act. They cheered lustily for the "little Colonel," and after a good deal of bluster and talk settled down and became quiet.

A picket was formed, and forty of Company M's men put on guard; and toward the small hours people settled down for the night. I think if some of the ladies had told the truth the next morning, they would have admitted to having slept with one eye open. In the early morning the mutineers were brought up in squads by the guard and ordered to stack their guns in front of the commanding officer's quarters. Then they were taken back to the guardhouse, where the guns were examined to see whose were loaded, and were restacked. The prisoners were then brought up again, six at a time, to take their guns. In that way they found out whose were loaded. Some of the guns had evidently had the charge hurriedly withdrawn; and some even tried to evade taking the ones that belonged to them.

Our windows were on the same floor; and we could see them through the blinds. There were two or three most desperate-looking fellows. They were placed in close confinement; and it proved such a salutary lesson to the others that we had no further trouble. But I often wondered how it would have resulted had there been no

regular troops there; for the zouaves were men enlisted in New York City, some of the most undisciplined, dangerous characters, who under the influence of liquor would be desperate and uncontrollable. Some of the workmen were little better. Both together, had they combined forces, might have been dangerous.

The following Sunday at dress parade the prisoners were brought up by the guard, the companies forming about them while the adjutant read to them the army laws. Two of them bore such a defiant manner while the officer was reading, that it was with a feeling of satisfaction and security that we learned that they would be kept behind the bars during the remainder of their stay on the island.

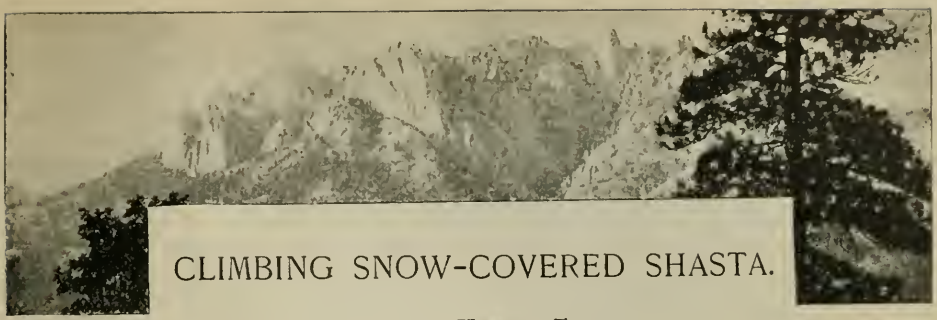
(To be continued.)

WITH THE GIFT OF AN OPAL.

By Jean La Rue Burnett.

AT sunrise yestermorn the Orient blazed
Fire-wedded to the heavens' richest hues,
And Earth awakened from her sleep amazed
To view such godly glories 'mid her dews.
Great globes of amber and rare saffron hung
Like love-lamps in the crystal of the sky:
While Dawn's fierce warriors in mad fury flung
The flaming silver of their swords a-high.
Then in a blood-red chariot of fire
Came o'er the misty heights the Prince of Day;
And as his steeds sped proudly high and higher
I watched the gorgeous beauties melt away.

Heart-heavy at this sight of sad decay
I turned unto the earth my sorrowing eyes;
When lo! I saw each golden light and ray,
That erstwhile gleamed amid the mellow skies,
Reflected in the depths of one great tear
That nestled fondly on the earth's soft breast,—
Pure type of passioned love,—an opal sphere.
I give it thee, a jewel for thy crest;
But, lady, heedful be lest thy sweet eyes
Conspire to drive its envious beams away,
As were the beauties of the morning skies
Eclipsed by more majestic lights of day.



CLIMBING SNOW-COVERED SHASTA.

By George Hamlin Fitch.

FEW people really know great mountain peaks like Shasta. Probably in this State there are only two men who may be said to be at home on Shasta,—who know its various moods in winter and summer, and who love the grim volcanic peak because of the very dangers and hardships they have encountered while scaling its rugged face. These men are the old hunter Sisson, who has lived for over thirty years in the shadow of the mountain, and John Muir, the naturalist, who has studied Shasta as other men study a language or a science, and who has made it tell him all its secrets. Both men have paid dearly for their mountain lore, for Sisson is prematurely aged by exposure to the weather in his hundreds of expeditions into the fastnesses of Shasta; while Muir on several occasions has narrowly escaped death in great storms on the summit of the mountain. Sisson will tell you of hunting trips in which he was alone for days in a trackless wilderness of snow which would have been the grave of a less skillful mountaineer; while Muir in his admirable article on Shasta in "Picturesque California" has told of his vigil on the mountain in a great snowstorm that forced him to remain in camp for several days. To few men is given this supreme skill in mountaineering which makes them flout the worst storms of winter; but any one in good health and with moderate experience in mountain climbing may get in a few days so clear an idea of the beauties of Shasta that he will carry in his memory until the day he dies the picture of this superb peak, with its bold, sweeping outlines, etched against the clear, blue sky.

It was my good fortune last September, after a year of hard work, to secure a fortnight's vacation, half of which I spent on the edge of the Colorado Desert, not far from the mysterious Salton Lake, that excited the interest of scientists, but is now little more than a name. Then from this fringe of the desert, with its burning heat of 110 degrees in the shade, the railroad took me, straight almost as the crow flies, to the frozen North. It was a reversal of the Fourth of July orator's favorite phrase, "from Siskiyou to San Diego;" but it served to give an excellent idea of the magnitude of California and of the incomparable variety of climate, soil and products that may be found within its borders. Any one in search of the picturesque cannot do better than take this twelve hours' ride from Sacramento to Shasta. The upper Sacramento Valley, dotted with superb oaks and guarded by the Lassen Butte, standing like a warder of the peaceful plain, furnishes one of the most charming prospects in the country. Beyond Redding, the busy county-seat of Shasta, the Sacramento Valley narrows till it is little more than a great cañon through which bowls the swiftly flowing river. The railroad leaps the river again and again; it dashes round bold headlands, hugs the sides of precipices, plunges into tunnel after tunnel, crosses frail trellises that span enormous gulches. Sometimes it doubles upon itself like a huge snake coiling its folds. Every device known to the

railroad engineer has been employed here to overcome the difficulties of nature; and the conquest is so complete that one who knows nothing of grades or levels or curves cannot fail to be struck with this triumph of man over the blind forces arrayed against him. Shasta first reveals itself a cone-shaped mass of white against the sky, looking very much like pictures of Japan's sacred mountain, Fuziyama. A sudden turn in the river and the mountain is lost to view, only to reappear a few moments later, all aglow with the morning sunlight which is reflected in dazzling brightness from its snow-covered crest and flanks.

"Why," said a traveling companion of mine, "it's almost covered with snow, yet only a few days ago when I came down from Oregon you could only see a bit of snow here and there in the cañons. What a remarkable transformation in a single week!" Then turning to me he said with a chuckle: "I don't envy you your climb up Shasta now. That is all fresh snow, and you will have to wade through it waist deep. In fact, I don't believe you will find a guide who will make the trip, as it's too dangerous!"

This was rather discouraging to one who had found consolation for several months in the thought of enjoying the view from the summit of Shasta, and who had traveled nearly five hundred miles to climb the mountain. The nearer we got to the mountain the more completely it filled the eye and satisfied the imagination. Even the Castle Rocks, picturesque as they are and full of romantic suggestions, are dwarfed when this great mountain appears. Soon the train reaches the beautiful Strawberry Valley and pulls up at Sisson, which is exactly at the foot of the mountain. The town itself is a shambling lumber town. Its main street is lined with grog-shops and hurdy-gurdy halls. In summer it is redolent of sawdust and freshly cut lumber; in winter idle men crowd its saloons, and coarse vice shows its unlovely features.

Back of the town on a slight elevation stands the old hotel of hunter Sisson, from which one gets the finest view of the mountain. It would take the pen of Ruskin to do justice to Shasta. Like El Capitan or the South Dome in Yosemite it is unique, set apart from all other great masses of stone. No rival uplifts its head for more than fifty miles. It springs from the valley far below, rising so gradually that for miles the ascent is so gentle as to be scarcely perceptible. Unlike the peaks that encircle the Yosemite, it has no lofty mountain plateaus about it to dwarf its height and rob it of its full impressiveness. For half its height of 14,440 feet it is wholly free of timber, its outlines cut as clearly against the sky as the finest strokes of the etcher's needle. Through its mantle of snow its gaunt ribs show here and there, while, at times, when the fierce north wind blows, Shasta flings a snow banner far out to the south, light and fleecy as clouds after a summer shower. Below the snow line comes a stretch of volcanic, brown rock, and then the woods begin,—stunted pine and fir, then noble sugar pine and cedar, and then a dense growth of chaparral that comes down to the valley.

After thoroughly enjoying my first view of Shasta I set about getting a guide for climbing the mountain. Although it was late in the season it seemed to me that any one accustomed to the mountain would have no hesitation in making the ascent. But when I approached the guide who had been regularly in charge of tourist parties during the season he declared flatly that he couldn't and wouldn't go for any price. His main excuse was that he was building a house, and was anxious to complete it; but he revealed the real reason when he said that the snow was too deep on the summit, and that it was so cold up there one would freeze to death. Then others were

Mount Shasta from the Uplands.

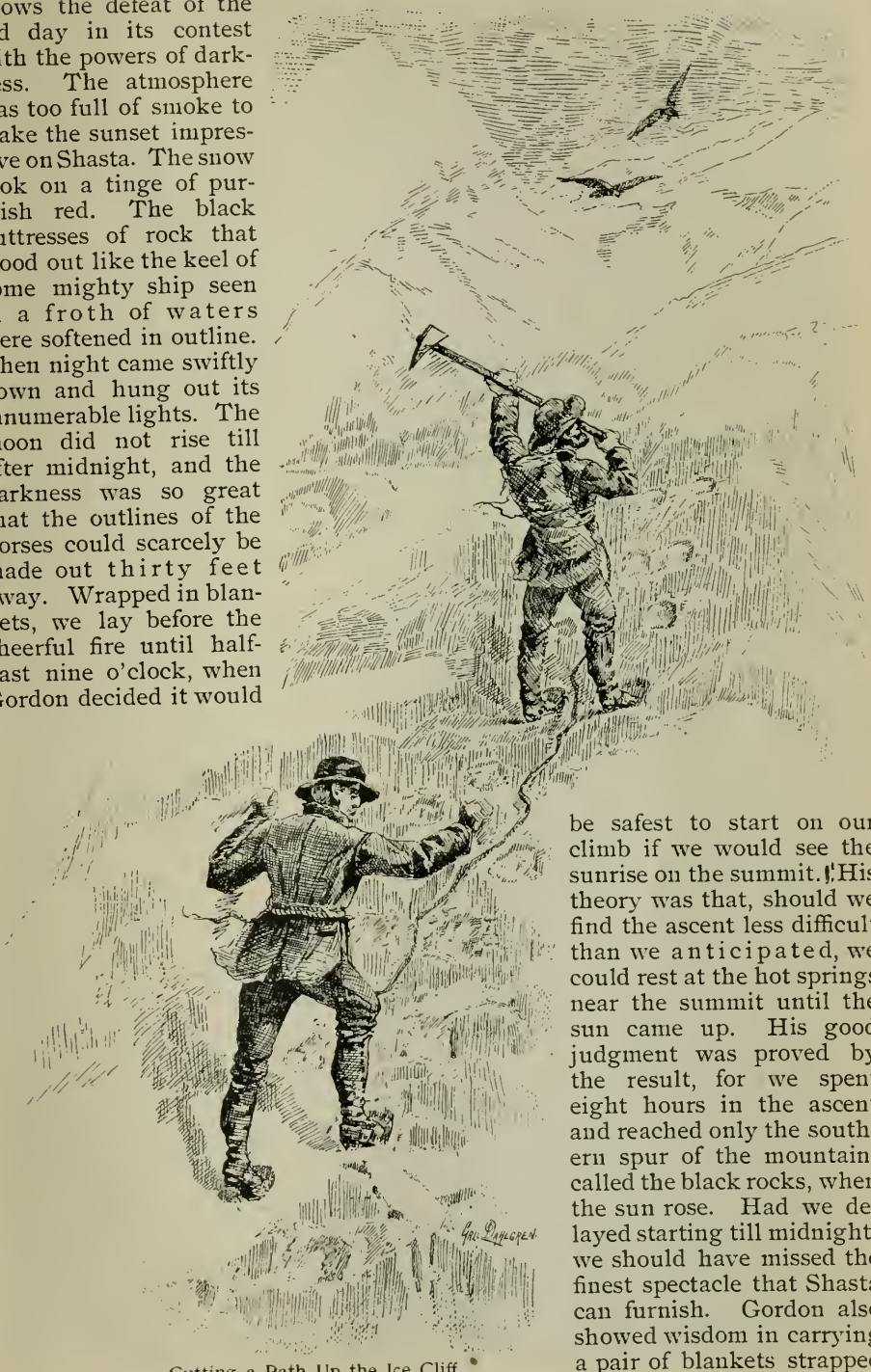
sought with no better success. Having traveled so far to climb this mountain I was now determined to make the ascent if I had to go alone; but good fortune threw me in the way of John Sulloway, an old mountaineer and stage driver, who now keeps a livery stable at Sisson. John was a good mountain climber in his day, having assisted Clarence King in his work in the high Sierra; but without any preliminary training he did not feel equal to a trip up Shasta, with what looked like heavy snow on the ground. So he took me in his cart to one of the mills near town, and there I secured the services of Lew Gordon, who had hunted over the mountains for years and who had guided several parties to the summit. Gordon looked what he proved to be,—a man of exceptional strength and endurance, very deft of hand in improvising ways out of difficulties, and fertile in resource. We secured three horses and a camping outfit of Sisson. The outfit was all right except the horses. Two were so weak and poor, being taken directly from pasture, that they well-nigh gave out the first afternoon, crawling at a snail's pace over the trail. The pack-animal was the strongest and surest-footed of the three, and its instinct in following a trail proved of real service.

We started about noon. The day was sunny and warm, but clouds were flying over Shasta, and the signs indicated a storm within a few days. However, the risk of a snow squall on the summit had to be taken, as my stay was limited. As soon as we plunged into the trail east of the town, we lost all sight of the mountain. This trail wound for several miles through dense chaparral of manzanita, chincopin, wild cherry and deerbrush. The manzanita was particularly thick along the trail, and its strong branches continually swept against one's legs. After about two miles an open space in the woods gave a fine view of Castle Rocks and the lake which mirror's their crags. The whole of the beautiful Strawberry Valley was spread like a map below. With the river winding through it, and clumps of oak and pine dotting the greensward, the valley bore a strong resemblance to bits of country in Western New York or Ohio. After passing through the chaparral we came to fine woods of pine,—sugar and yellow,—spruce, fir and cedar, while above this the growth was almost wholly silver fir.

Soon we reached a wilderness of bowlders and rocks, piled in the most fantastic shapes. This is called the Devil's Kitchen. The rocks all bear evidence of strong volcanic action; they are granite, browned and calcined by fire; nothing but a few stunted and gnarled trees grow in this abomination of desolation, which even the birds shun. The higher we went up on the trail, the scantier became the vegetation, until at last only a few storm-beaten pines were to be seen, their trunks bent like the backs of aged men, and gnarled and twisted by their hard fight for life with wind and frost.

About five o'clock in the afternoon we reached the camping ground, ten miles from Sisson and about six miles from the summit of Shasta. The camp is sheltered by several large trees, but it is defective in having no water within a quarter of a mile. Here Gordon gave the horses a feed, and we soon had a good fire and cooked a meal, that the sharp mountain air made one relish. The mountain looked very near and very cold. As the shades of night settled over its snowy summit, the long slopes of driven snow appeared drear and forbidding. Yet the mountain fascinated one by its air of mystery, and the eye returned to it again and again, eager to penetrate the secrets that it held. The sunset was noble; the west was barred with long lines of living flame which melted into crimson and golden yellow; and then, when the great ball of fire dropped far below the horizon, settled into that leaden ashy hue that

shows the defeat of the old day in its contest with the powers of darkness. The atmosphere was too full of smoke to make the sunset impressive on Shasta. The snow took on a tinge of purplish red. The black buttresses of rock that stood out like the keel of some mighty ship seen in a froth of waters were softened in outline. Then night came swiftly down and hung out its innumerable lights. The moon did not rise till after midnight, and the darkness was so great that the outlines of the horses could scarcely be made out thirty feet away. Wrapped in blankets, we lay before the cheerful fire until half-past nine o'clock, when Gordon decided it would



Cutting a Path Up the Ice Cliff.

be safest to start on our climb if we would see the sunrise on the summit. His theory was that, should we find the ascent less difficult than we anticipated, we could rest at the hot springs near the summit until the sun came up. His good judgment was proved by the result, for we spent eight hours in the ascent and reached only the southern spur of the mountain, called the black rocks, when the sun rose. Had we delayed starting till midnight, we should have missed the finest spectacle that Shasta can furnish. Gordon also showed wisdom in carrying a pair of blankets strapped

to his back. Without these we should certainly have frozen hands or feet, and without the warmth which my blanket gave it is very doubtful whether I should ever have reached the summit.

My dress was a good one for such a trip. Over an ordinary tennis flannel shirt I wore the heaviest blue flannel shirt which I could buy in Sisson. Overalls covered trousers, leather leggins protected the lower limbs, and nails in heel and toe of stout shoes gave one firm footing on the ice. We carried several gunny-sacks to wrap about our feet should the snow prove deep.

We were able to ride for about half the way to what is known as the horse-camp, just on the edge of the snow. Probably if we had trusted to the instinct of the old pack-animal we could have ridden the whole distance. But the night was so dark that no trail could be detected, and Gordon at last concluded that the veteran had become bewildered. So we tied the three animals in the shelter of an immense bowlder, and leaving them some feed struck out on foot. We clambered over the loose rocks, through the inky darkness, until at last we reached the horse-camp on the edge of the great snow-field. The reflection from the snow gave a faint light, and, of course, all that had to be done was to shape as good a course as possible to the red rocks, great landmarks just below the summit. Gordon was rejoiced to find that there was a crust on the snow which would bear us up, and we made rapid progress across the smooth expanse.

On our right was a high rocky ridge that was nearly covered with snow. On the left the Whitney glacier that looked very dark, cold and forbidding in the half-light. Soon we struck softer snow, and the ascent became more laborious. Instead of the piercing cold which we expected the air was soft and mild; for the whole mass of the mountain protected us against the north wind. For three hours we made good time. Then the difficulties began. We had made a little more than half the distance to the red rocks, when we began to encounter smooth slopes of hard snow as steep as the roof of a house and as slippery as ice. Gordon was able to make footsteps for a time by stamping with his heels, but at last the snow became genuine ice, and then he had recourse to the pick.

Step after step, for over half a mile, had to be cut in the smooth surface of this great mass of ice. It was laborious work, and even with the aid of the alpenstock it was dangerous; for a slip or a misstep would have meant a fall of at least two thousand feet down upon the jagged rocks which formed the upper edge of the glacier. Once started, nothing could have saved one from the full descent; for the alpenstock cannot be buried deep enough in the ice to check a fall. The air began to be perceptibly thinner as we neared the red rocks that mark the point beyond which many climbers never pass. It was about three o'clock in the morning when we reached these rocks; and after taking a drink of tea from the canteen we set our faces for the final climb to the mountain top. An occasional gust of icy wind showed what we might expect when we emerged from shelter. This last hour of climbing was very laborious and exhausting. We skirted the southern ridge of the mountain, passing along the edge of icy precipices; and just as the eastern sky began to flush with a dull red we reached the black rocks, a coigne of vantage almost equal to the summit for a superb view of the east, south and west.

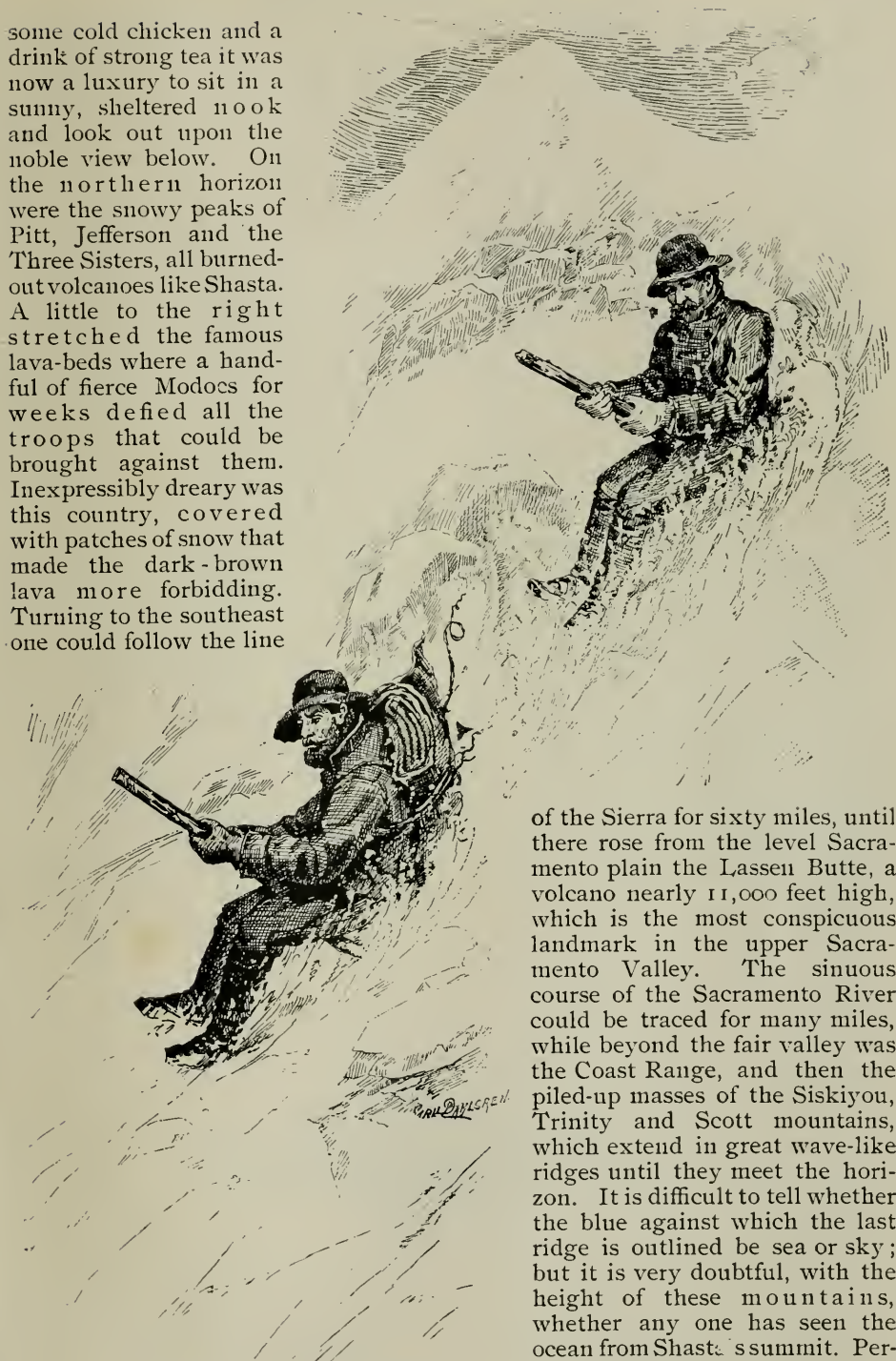
Here, for the first time, we felt the full force of the cold wind from the north. It came over leagues of snow, and was so deadly cold that it seemed to penetrate to the marrow. It made Gordon's teeth chatter, while upon me, fresh from the heat of the Colorado desert, it had the effect of benumbing my faculties and paralyzing my energy. The precious blankets were brought out, and with our backs to the bitter wind we broke our fast

Mount Shasta.

and watched the sun rise. Even the misery of extreme cold did not prevent me from enjoying this superb spectacle. The sky was beautifully clear, except near the horizon, where clouds were massed in huge bars. These took on the various tints, — leaden gray, pearl, rose and deep crimson, — which heralded the approach of the sun. As each color appeared on these cloud-strata, the reflection moved like a great shadow over the sleeping world below; but, unlike a shadow, it served to reveal mountain tops, wooded hills, level valleys and streams. Then the long colored rays of light seemed to leap up like a flash to the snowy flanks of Shasta, which were soon all aglow under the flush of dawn. Nothing more impressive could be conceived than this awakening of the snow-shrouded mountains to a new day. The vastness of this expanse of mountainous ridges, looking like a storm-tossed ocean suddenly turned to stone, the awful desolation that surrounded me, the sense of loneliness, the feeling of remoteness from the world, — all these emotions crowded upon one's mind and brought tears to the eyes. Though the advent of the sun carried life and warmth to the valleys, of which we could catch glimpses through the haze, it seemed to have no effect on Shasta. The wind was as penetrating as before; and, though scarcely able to drag one foot after the other, I set out to follow Gordon to the summit. After leaving the Peak, we struck a hollow in which the snow lay deep. The crust would not bear one's weight, and at every step we sank to the waist. The labor of crossing this dreadful hollow was something which it is not pleasant to recall. The rarefied air made me pant, as though I had been running a foot-race. Every hundred yards it was necessary to stop, lean on my alpen-stock, and take a rest. Only by the greatest exertion of will power could the benumbed and nearly exhausted body be made to move. Through all this miserable journey of only a short half mile or more, my mind was firmly fixed on reaching the summit, if it took all day to do it; but the sensation of being thwarted by the unwilling body was something strange and unpleasant. It was as though the brain were outside the body, urging it on, and impatient of its weakness and sloth. At last I reached the hot springs, which are in a hollow just below the summit; and though the odor of sulphur was very unpleasant the warmth was invigorating. These springs form one of the most peculiar features of Shasta. Out of a patch of ground of about half an acre come jets of steam. The rock is heated so that it burns through the shoes. In many places the steam bubbles through a number of small holes, lifting the loose rock precisely as pent-up steam lifts the cover of a tea-kettle. The smell is the disagreeable odor of sulphureted hydrogen, and the gases are so pungent as to give many persons nausea of the stomach. This seething pent-hole of fierce interior fires is surrounded by snow-fields that cover the burned-out craters of this old volcano; for Shasta at one time, from all geologic evidence, was in active eruption. Among these hot springs John Muir found refuge when he and a companion were overtaken on the summit by a great snowstorm.

After a short stay at the springs we set out for the summit. Gordon easily outstripped me, for the rarefied air again made progress slow for me. A scramble up a steep hill of loose stones, and the summit was reached at last. It is crowned by the geodetic monument erected by the Government to aid the coast survey in triangulation. This monument is not impressive, as it bears a striking resemblance to a huge fire-cracker. It is made of galvanized iron, and upon the paint that once covered it have been scrawled the names of hundreds who have climbed the mountain. Just below the monument the best general view was obtained. The air was as clear as fine wine; and refreshed with

some cold chicken and a drink of strong tea it was now a luxury to sit in a sunny, sheltered nook and look out upon the noble view below. On the northern horizon were the snowy peaks of Pitt, Jefferson and the Three Sisters, all burned-out volcanoes like Shasta. A little to the right stretched the famous lava-beds where a handful of fierce Modocs for weeks defied all the troops that could be brought against them. Inexpressibly dreary was this country, covered with patches of snow that made the dark-brown lava more forbidding. Turning to the southeast one could follow the line



Sliding Down the Face of Shasta.

of the Sierra for sixty miles, until there rose from the level Sacramento plain the Lassen Butte, a volcano nearly 11,000 feet high, which is the most conspicuous landmark in the upper Sacramento Valley. The sinuous course of the Sacramento River could be traced for many miles, while beyond the fair valley was the Coast Range, and then the piled-up masses of the Siskiyou, Trinity and Scott mountains, which extend in great wave-like ridges until they meet the horizon. It is difficult to tell whether the blue against which the last ridge is outlined be sea or sky; but it is very doubtful, with the height of these mountains, whether any one has seen the ocean from Shasta's summit. Perhaps you get the best idea of the

great elevation of Shasta from a careful study of the little valleys at the foot of the mountain. Big ranches with thousands of head of cattle look no larger than a square on a checker-board, and a river shrinks to a mere silver thread.

The descent of the mountain was far more laborious than usual, because we dared not risk sliding down by the same way we had climbed up. In the first place there were too many jagged rocks in the way, and again, no one could steer a sure course over the icy surface of the great snow-field. Any deflection from the true course would carry one far down into the glacier, which would mean serious injury or death. So we were forced to keep along the high ridge below the southern peak, climbing over the loose rocks and occasionally floundering through the deep snow. When about half way down we reached a point from which it was safe to slide. Seated on a gunny-sack, grasping the alpenstock firmly between your knees and steering a course with the feet, you go down over the smooth snow with the speed of the wind. The rush of the keen air fairly takes away the breath, but the sensation is delightful; for this is probably as near to the motion of a bird on the wing as one may reach until the invention of the flying machine.

The descent was not without its element of hazard; for at frequent intervals great masses of rock came crashing down over the snow from the northern ridge. The warm sunshine evidently loosened these rocks, which came thundering down the mountain.

About four hours were consumed in the descent. We reached the horses soon after mid-day, and a little later we were discussing a meal at the old camping ground, looking out on the snowy mountain that had given us so hard a night's work. Shasta seemed lovelier than ever, with the warm sunlight resting on the dazzling snow; but we had made the intimate acquaintance of the mountain, and knew how deadly was that beauty and how deceptive the sunshine on the summit.

The return over the dusty trail was not pleasant. We felt the heat of the foothills after the piercing cold of the mountain air. The horses moved like snails, and it was a great relief when the town was reached once more. It was some satisfaction for danger and hardship endured to be able to disprove the prophets who had declared we could never reach the summit. But for my part if I climb Shasta again it will not be when the mountain is covered with snow. One ascent of the kind which I have tried to describe faithfully is enough for a lifetime.

THE NAVY IN CALIFORNIA.

By Ruthella Schultz Bollard.

COMPARATIVELY few outside of its immediate vicinity, in fact, scarcely any but "navy people," know exactly how the navy yard of the Pacific Coast is situated. There are also, as a matter of course, several other things that only navy people know. None but they, for example, know how important a factor of the body politic navy people are.

But (to return to the subject that at present demands our attention) the ideas of Americans in general as to the location of their own naval establishments are certainly either very vague or altogether erroneous.

Let it be understood, then, that the San Francisco Navy Yard is located on Mare Island; the New York Yard, at Brooklyn; the Philadelphia Yard, on League Island; the Norfolk Yard, at Portsmouth, Va.; the Boston Yard, at Charlestown; that of Portsmouth, Me., at Kittery; while those of Washington and Pensacola are where their names would indicate.

The San Francisco Navy Yard, the only one as yet established on the Pacific Coast, is located on an island which, lying along the eastern side of San Pablo Bay, is separated by a narrow strait from the mainland, and is directly opposite the charmingly situated town of Vallejo.

This island, which is twenty-six miles distant from San Francisco, is two miles and a half long, with an area of about a thousand acres, and an altitude, at the highest point, of 280 feet.

The location is admirably adapted for a naval station, the land-locked harbor having every advantage of accessibility, capacity and depth; while, owing to the influx of fresh water from the San Joaquin, Sacramento and Napa rivers, it can boast immunity from the destructive teredo.

Probably no one hears for the first time the name of the island without question as to its meaning and derivation. Those versed in legendary lore answer with the story of the old white mare.

In "the early days" there was but one ferry-boat on Carquinez Straits and the waters adjacent,—a barge constructed of planks secured to a float made of oil-barrels.

Once upon a time this craft, on its way from Martinez to Benicia, encountered a sudden squall; and it required but a few moments for the terrified animals of which its freight consisted to kick the boat to pieces and betake themselves to the water.

Among those that succeeded in reaching terra-firma was an old white mare belonging to General Vallejo; and the island on which it was found contentedly grazing was named by the General *Isla de Yegua*, or Island of the Mare.

It is probable, however, that some of the early missionaries named it Mare Island, from the Latin *mare*, the sea; just as the region to which it belongs was doubtless named from the Spanish *solano*, the east wind; though General Vallejo states that the county so called was named for Solano, the chief of the Suisuns.

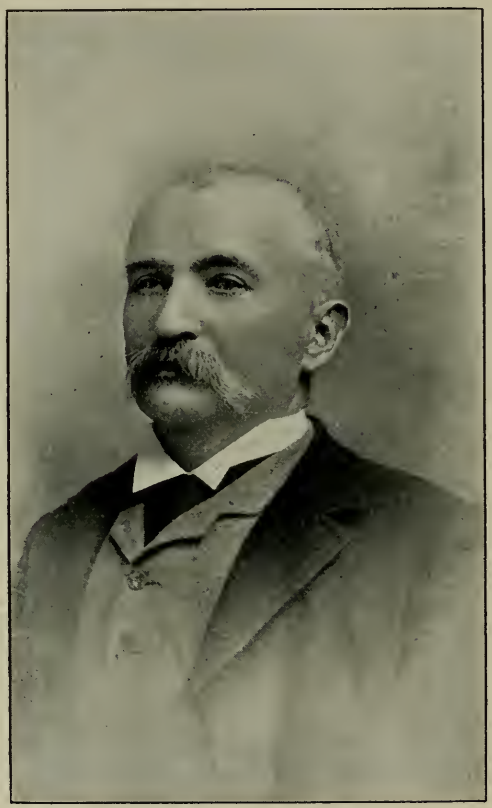
In the year 1850 Mare Island was granted by the Mexican Government to one Castro, who forthwith sold it for the sum of $7,000, the purchasers disposing of it in 1851 at the advanced price of $17,500. Within two years thereafter (January 4, 1853), it was purchased by the United States Government for more than four times the last-named amount, and nearly

twelve times the exorbitant price first paid,—for no less a sum than $83,000!

A further expenditure of $317,000 was required to put the Pacific Coast naval station in simplest working order, mechanics' wages being five and six dollars, while ship-carpenters and caulkers rated as high as nine dollars per diem.

The month following, the astronomers of the Exploring Expedition erected the observatory.

Other buildings then in course of erection or begun soon thereafter were foundry and machine shops; storehouse and workshops of the Department of Construction and Repairs; storehouse and workshops of the Department of Equipment and Repairs; yards, docks and workshops; Bureau of Navigation; store-house, sawmill, bishop-derrick, yard stables, etc.



Admiral John Irwin.

Commander David G. Farragut was the first commandant of the yard, the national flag being first hoisted October 3, 1854.

The sectional dry-dock, built by private enterprise, was the initial step toward the equipment of the yard, the sloop-of-war *Warren* being the first vessel floated in, September 25, 1856.

Since then the office building, commandant's residence, officers' quarters, marine barracks and adjuncts, naval hospital and accessories, magazine reservation and buildings, lighthouse

reservation and buildings, stone dry-dock and buildings, receiving-ship and cemetery reservation, have been severally built or established, forming, together with "Dublin," a cluster of cottages for those employés who cannot be spared to live on the mainland, —a very considerable colony.

ing of numerous vessels, among them the *Charleston* and *San Francisco*, has been witnessed by admiring crowds.

"Mare Island is certainly a paradise for children," was remarked to an officer of high rank who was deploring the mandate of Fate and the Department banishing him (and

The Corridor of the Pay Office at Mare Island in Winter.

The stone dry-dock, the largest in the New World, constructed at a cost of $2,750,000, was begun in 1872, and has not yet arrived at full completion, some fine finishing work being now on hand. The receiving-ship *Independence* was the first ship floated in, October 30, 1886, since when the dock-

by consequence his family) to the inclement Atlantic seaboard.

"Mare Island is a paradise for grown people," he answered with the emphasis of strong conviction, —an assertion readily conceded by those familiar with the delightful all-the-year-out-of-door life, the unrestrained

social intercourse, the natural isolation which so effectually promotes the much-desired exclusion of the work-a-day world,—and withal the accessibility of the metropolis, all of which make this one of the most desirable stations in the Department.

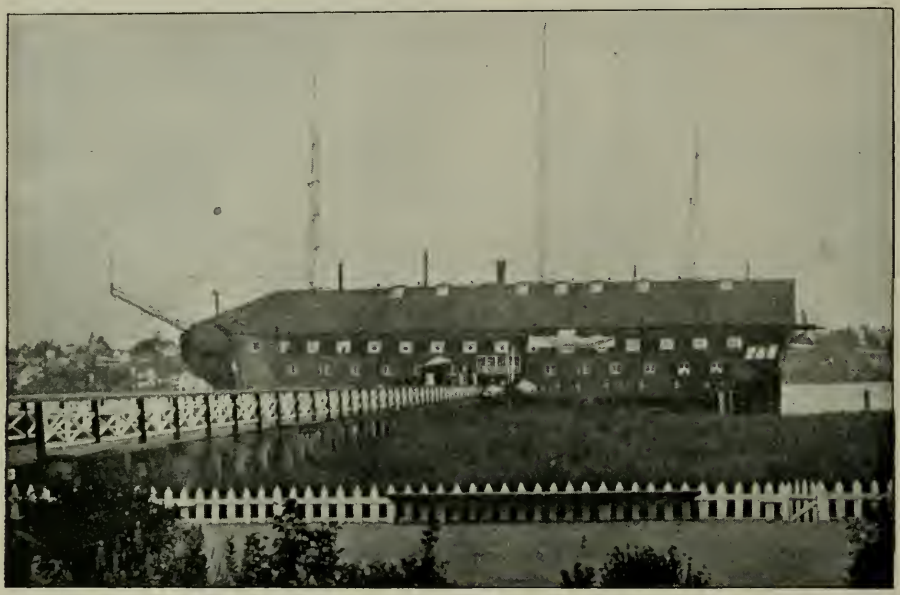
Fancy an emerald isle set in a silver sea, a realm of fairy-land where Uncle Sam (being a good paymaster) is fairy godfather; where in one park you have your lawn-tennis court; in another your croquet-ground, and yonder your bowling-alley; where, of an afternoon,

> In * * * * * * * * * a land
> In which it seemeth always afternoon,

you may lounge or promenade or drive or dance—if so you choose—to the music of one of the best-trained bands outside of San Francisco; where you can ride or drive for miles overlooking the summer sea, or with billowy verdure on the one hand, on the other the glory of flower-gardens.

Yet, when all is said, it must be confessed that there is vast room in this paradise for improvement.

Though etiquette constrains the officers of foreign navies who visit Mare Island to speak only in general terms of commendation, it is nevertheless a fact that civilians from foreign lands—even from the English colonies in America—are unanimous in their expressions of disappointment, invariably comparing our naval stations and other Government reservations with their own,—greatly to our disadvantage in point of architecture, landscape gardening and neatness.

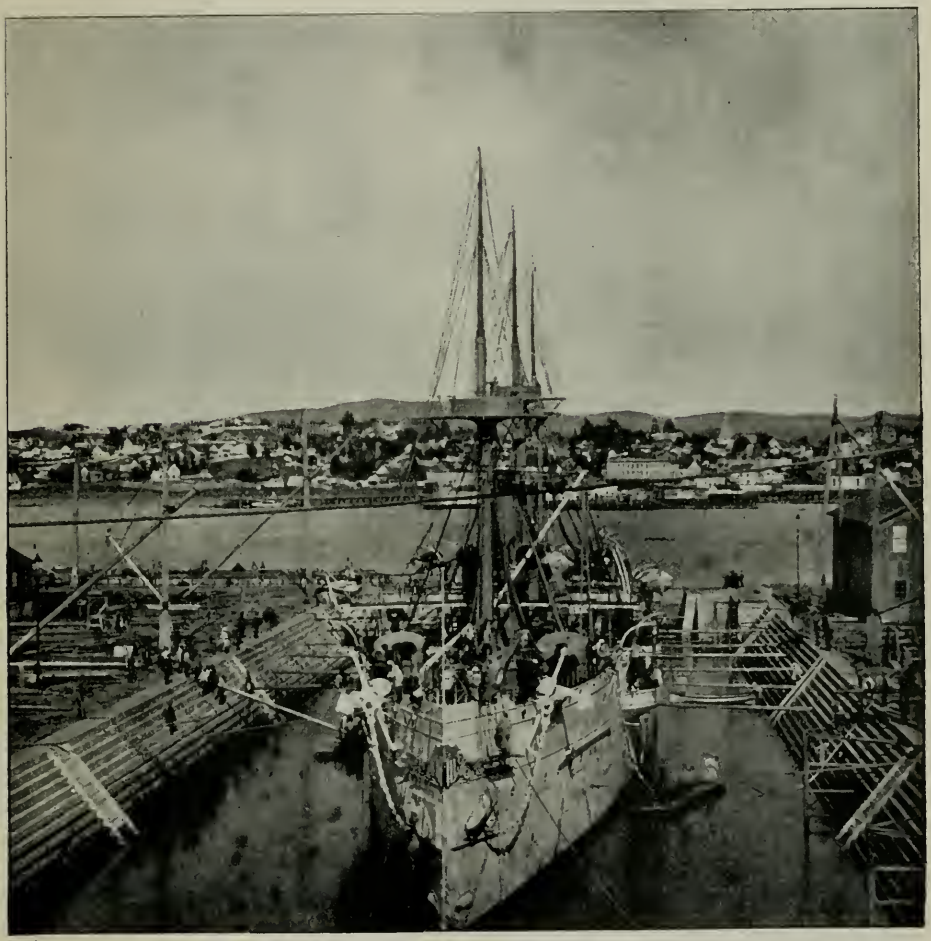


Receiving-Ship "Independence," Mare Island.

It must be said, however, that every year sees some advance in these respects, the administration of each successive commandant being marked by some special line of improvement in accordance with his individual taste and judgment.

But it is when considered as Uncle Sam's workshop that the navy yard is of interest to the greatest number. At times there have been as many as nineteen hundred men employed in the various departments; at present there are about five hundred.

The history of this station has certainly demonstrated the fact that Government works in the neighborhood of a small town are a decided disadvantage,—even a misfortune. They are desirable only in the vicinity of large cities, where numerous and old-established industries make it impossible that the Government works should be regarded by the entire population as the one acceptable place of employment.



The Dry-Dock at Mare Island.

In this instance, the navy yard and Vallejo having grown up together; few industries have been able to gain a foothold in the town. Private enterprise cannot compete with Government works. It is not only the fascination of working for the fairy godfather, but also the substantial advantages of oftentimes larger wages and always shorter hours that make men seek work in "The Yard," notwithstanding the risk—even the probability—of long periods of idleness.

As, however, in the natural course of events an infant outgrows its leading-strings, so Vallejo will doubtless in time outgrow its dependent condition, and learn merely to account the

Government works as one of the many industries within its reach.

Though the commandant of a navy yard can scarcely be styled an autocrat, his rule is sufficiently absolute to justify to some extent the declaration of a well-known commodore who, when the chaplain, without having first consulted the commandant, gave notice of the visitation of the bishop, exclaimed, "I'll have you know, sir, that *I* am bishop of this navy yard!"

earthly paradise for officers, "Uncle Sam's Workshop," the "Saints' (or Sinners') Rest," the nursery of the party in power, or the stamping-ground of politicians,—a phase of the subject on which I forbear to dwell.

Though it must be confessed that nine-tenths of those who have any connection with the navy yard naturally view it in one or another of the lights above named, the fact remains that the vast majority of the Ameri-

U. S. Cruiser "Charleston."

Certainly in every navy yard the commandant is chief. He and his household strike the key-note of its social life. One administration might be styled "The Gay;" another, "The Intellectual;" another, "The Devout."

Of the present régime it is safe to say that never have smiling Peace and happy-hearted Contentment more graciously adorned this earthly paradise.

It would be absurd, however, to consider the navy yard simply as an

can people are without personal connection, either direct or indirect, with the naval establishment. To one living in the neighborhood of a provincial navy yard it would seem that the whole of America and a large portion of Ireland, Germany, England, Scotland, Italy, France and Greece were striving to impress the American Eagle into the service of each and every individual. While some would fain mount upon his back, others would gladly pick his bones.

Vallejo and the "Charleston" from Mare Island.

But these multitudes constitute in reality a very insignificant, an almost inappreciable, part of the body politic.

The fact to be considered, and that which it is hoped the Fifty-second Congress will take seriously and effectually into consideration, is that the American people look to the navy for that protection of their interests, that vindication of their rights, and that maintenance of the national honor, courtesy for every American citizen in foreign parts and on the high seas.

What prospects have we of soon realizing these ambitions?

To the mind of that vast majority of the American public which has no connection with, or special understanding of, naval affairs, it is only the number of ships at the command of the Department that conveys any tangible idea of the status of the navy. The

U. S. Cruiser "San Francisco."

which a navy, and a navy alone, is able to afford them.

Events of the past year have not only demonstrated the urgent need of an effective naval establishment, but have also aroused the American people to a strong and unappeasable determination to become a power upon the high seas, to be able to defend their own seaboard, to protect their industries, to command the respect of neighboring nations, to demand justice and secure

numerical strength of our available fleet is, indeed, of prime importance; but equally to be considered are the merits of the respective ships,—their type, rate, armament, etc., not to mention the efficiency of the "service" (by which is meant the personnel of the navy); the equipment of navy yards; the manufacture of ordnance; the improvements in ammunition, etc.

That the number and merits of our ships are of the first importance let

the following from a leading English magazine bear witness:

"Every additional war-ship that floats the star-spangled banner at her peak," says the *Review of Reviews*, "increases the urgency of a good understanding that may hereafter ripen into a good working, and, if need be, a fighting, alliance, between the two branches of the English-speaking race in the Western hemisphere."

To our ships, then!

Gun on Cruiser "San Francisco."

The latest official naval register reports, aside from receiving-ships, school-ships, training-ships, tugs, etc., none of which come within the scope of this article, the magnificent number of sixty-four vessels, including all types now in commission or ready to go into commission at short notice. But I am obliged to add that twenty-one of these compose an array of old wooden ships, concerning which I quote from Secretary Tracy's annual report, as dispatched to the San Francisco *Chronicle*, December 7, 1891:

. . . "The old wooden ships have practically passed out of existence. They no longer count even as a nominal factor in naval defense. The sole reliance of the country to-day for the protection of its exposed seaboard is the new fleet."

Elsewhere Secretary Tracy is quoted as saying that in the course of four years, if present plans are successfully carried out, the United States will have a navy of creditable efficiency.

The plans referred to comprise among other matters (such as the establishment of an ordnance factory on the Pacific Coast, the test and manufacture of explosives, the improvement of the service, etc.) the completion of sixteen vessels of various types, each of which is expected to be a model of its kind.

But it takes one's breath away to think of what might happen—what

might not happen!—during those four years. To quote again from the Secretary's report:

"Even with the present authorized fleet, to protect either seaboard will involve stripping the other at a critical moment. If the Nicaragua Canal were completed the strategic situation would be largely modified." (To judge from present prospects, the availability of the canal and that of our new navy are likely to be very nearly contemporaneous.)

"The press of the country, representing the people," continues the Secretary, "does not believe that cities like San Francisco, Seattle and Tacoma should be open to attacks of a third-rate power, whose ships by a sudden movement may enforce contributions that would pay in advance the expense of a war. If any one believes that such rapidity of movement is impossible, let him recall the circumstances under which the *Esmeralda* appeared in April last without warning close to the California coast, sending on the *Itata* to San Diego. As little does public opinion believe that the commercial seaports of the Gulf and Atlantic should be unprotected from an attack by any nation whose fortified harbors and fully equipped dockyards are within forty-eight hours' steaming. It is erroneous to suppose that seacoast States alone have a direct interest in the matter. The prosperity of the whole interior depends upon the uninterrupted supply of the demands of a foreign market. By a blockade of the great outlets the great industries of the interior may be paralyzed."

U. S. Cruiser "Baltimore."

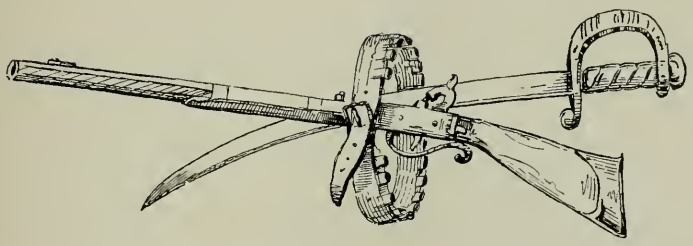
These are serious considerations presented with the force of profound conviction, the dignity of unquestionable authority and the clearness of practical insight.

What are we to do about it?

Let every village newspaper, every great daily, every Fourth-of-July orator, every stump speaker,—above all, every *voter*,—take up the strain and ring the changes on the theme, acting as well as talking, until our representatives take the subject up in earnest, and see to it that no Englishman ever again says, as was said in the *Review of Reviews* for September last:

"There is not an officer in the British navy who is not trained from his childhood to regard the French as the only enemy to be feared on the high seas. No other power possesses a navy worth speaking of. If the French navy did not exist we might dismantle more than half our ironclads."

It is to be hoped that France appreciates the compliment, and that it may be our turn next!



REDEEMING LIGHT.

By Rose Hartwick Thorpe.

THE sun beholds no shadow, for his rays
Dispel the darkness. Wheresoe'er he turns
The glory of his own reflection burns.
Night flees before the splendor of his gaze.

He smiles, and all the universe smiles back.
His warmth, far reaching, touches hidden springs
Of dormant good; and myriad growing things
Expand and blossom in his shining track.

With lance of light he pierces all the glooms;
His kisses speed the snow-bound blossom's birth.
Thus *Love*, supreme, transcendent light of earth,
Touches the heart, and it expands and blooms.

MEN OF THE DAY.

By James K. Armstrong.

CAPTAIN WILLIAM L. MERRY, whose earnest and able advocacy of the Nicaragua Canal project has brought him very prominently before the Western public of late years, is a New Yorker by birth; although, coming to San Francisco as early as 1850, he has been so closely identified with its growth that California claims him as one of the foremost among her pioneer sons.

Sixteen years of his early life were passed in sea-faring in the California, China and European trade. Seven times he has made the trip around Cape Horn; five times the voyage around the Cape of Good Hope; and three times he has circumnavigated the globe. At different periods of his career he has been the commander of such well-known steamships as the *America*, the *Arago*, the *Fulton*, the *Dakota*, the *Nebraska*, and the *Montana*, plying between New York and San Francisco in the Central American trade. Captain Merry lived in Nicaragua and Panama for four years, acting as the agent of the New York transportation companies. It was the close study he made during this period of the international commercial relations that makes him now an acknowledged authority on all subjects pertaining to the economics of transportation.

Since the year of 1880, Captain Merry has been a most persistent advocate of the building of the Nicaragua Canal. When he first began to push it, the Panama Canal scheme was before the public mind; and this other canal received but little encouragement. When Ferdinand de Lesseps visited San Francisco in 1880, to canvass for funds for the Panama Canal, Captain Merry, in an able address before the Canal Committee of the San Francisco Board of Trade, and in the presence of De Lesseps, plainly stated it as his opinion that no price on earth that commerce could afford to pay would ever make the Panama Canal scheme a success, for the reason that it was constructed according to an engineering impossibility. Subsequent events proved the soundness of his arguments as regards both Panama and Nicaragua.

In 1869 Captain Merry resigned from the Pacific Mail Steamship Company, and entered into mercantile life in San Francisco. For two terms he served as a Director in the San Francisco Board of Trade; he is also in the Merchants' Exchange of San Francisco, the Californian Immigration Association, the Garfield Monument Association, and other civil, scientific and benevolent societies.

While the Captain is a man of quiet domestic tastes, yet his pride of citizenship is so great that he exerts himself to the utmost to further all movements that tend to the upbuilding of the State and the community. His career has been such that he is universally respected, beloved, honored and deferred to; and few public movements are carried on without his generous aid.

There is no subject before the people of California to-day of so great importance as the proposed canal; and it speaks well for its success that such men as Captain Merry and others are giving it their strong and hearty support. It means new commercial blood infused into this Coast, an era of prosperity little appreciated at the present day; and, if the designs of the subject of this sketch are carried out, the harbors of this Coast will take on a new meaning, and the coasters of the East will bring the produce of the Atlantic to our very doors and return laden with our productions.

WILLIAM LAWRENCE MERRY,
Consul-General, Republic of Nicaragua.

THE ESCAPE OF PRESIDENT DIAZ.

By Andrew Brown.

IN June, 1876, Alejandro K. Coney, now Consul-General of Mexico at San Francisco, was purser of the American steamship *City of Havana*. On the morning of the day that she was to sail for Vera Cruz, two passengers came on board, one an American and the other a very large and peculiar-looking man, who immediately went to his room. Up to the arrival of the ship at Tampico nothing was seen of him. When the *Havana* arrived at Tampico a large number of troops had to be taken on board. They had marched from Icamole, where they had defeated General Diaz after a desperate struggle.

When the steamer arrived a heavy storm was blowing; and only a portion of the troops and some of the officers managed to get on board. The vessel was forced to wait until she could secure the balance of the troops. As soon as some of the officers came on board, the large gentleman referred to came out of his room naked and dived overboard, attempting to swim to some brigs that were lying about five miles off. The cry of "man overboard" was raised. A boat was lowered, and the man, being an exceptional swimmer, was with much difficulty picked up. As the boat came alongside the gangway of the ship some of the soldiers on board recognized him as General Diaz. A lady passenger, who also recognized him, with great presence of mind ran down the gangway with a sheet and threw it over his head and body as he was being brought up, thus preventing him from being further recognized. Purser Coney was immediately notified, and went in to see him. Finding him very much exhausted he gave him some stimulants and left. A short time afterward the Mexican mail agent, Mr. Manuel Gutierrez Zamora, now the Consul at New Orleans, went to Mr. Coney and told him that the man who had been rescued was General Diaz, who had served his country so nobly against the invasion of the French, and that he wanted Mr. Coney to save him from the troops, who were anxious to capture him. In furtherance of this he took Mr. Coney with him into the General's room, and introduced him and then retired.

When alone Diaz, for it was he, raised himself up in bed and gave the purser the hailing sign of distress, showing that he was a brother Mason, and asked his assistance. Mr. Coney told him that there was an American man-of-war in sight that would soon be up, and that he would ask the captain to take him on board. Diaz replied that he had no hopes of the American man-of-war taking him on board; that he would rather trust himself to him, if he would consent to aid him. Mr. Coney said that he would let him know as soon as he had spoken with the officer who would come on board for his dispatches. To this Diaz agreed

When Coney left the General's room the colonel of the regiment, who had come on board, said he wished the purser to go with him to the captain of the ship, as he wanted him to act as his interpreter. The result was a demand upon the captain for the delivery of the man, whom the colonel claimed to be General Diaz, but who appeared on the passenger list as Dr. de la Boza. The American captain replied that the passenger was booked for Tuxpan, and that when he went down the ladder to leave the ship he could see him; but he forbade the purser issuing a ticket for any further point. The colonel then asked that he be allowed to station sentries at the General's door. The captain

consented to this; but in translating his answer Mr. Coney purposely made a mistake, and told him that he could place no sentries at the door, but if he chose to do so he could station an officer at the stern of the vessel so that he could command a view of the room occupied by the suspect. The colonel was satisfied and went out, when the captain turned to the purser and gave strict orders for him to let no one interfere in any way with the passenger supposed to be General Diaz.

A little while afterward the lieutenant of the man-of-war came on board for dispatches; and the purser placed the case before him. The latter immediately went back to his vessel, leaving his steward on board so as to give him a pretext to send back a boat without exciting suspicion. In about half an hour the boat came back with a report from the Captain of the man-of-war, which was, 1st: Has the man in question committed any crime; 2d: Is he an American citizen; 3d: If the captain of the *Havana* will enter into correspondence on the subject, I will take it under consideration. As General Diaz was not an American citizen, as he had committed a political crime, and as the captain absolutely refused to have anything to do with the matter, the idea of intervention by the American man-of-war was ended.

Mr. Coney, whose sympathies were now fully aroused, went to the room of General Diaz and told him of the affair. The General smiled and reminded the purser that he had foretold the result, and asked him what he intended to do. Mr. Coney told him that if he had the nerve to undergo some hardships and privations he would take him into his own room and hide him in a wardrobe, explaining that on board of ships people always hunt in the engine-room or coal-bunkers, these being the very first spots searched, and that the secret would then not be in his hands only, but in those of some twenty other people,—engineers, oilers, etc.,—who would know his hiding-place. To this Diaz replied that his motto was "*fortuna audax juvat.*"

The future President was suffering intensely from dysentery, with high fever; and Mr. Coney's first care was to get him in condition to be moved. Mr. Zamora, the mail agent, the American doctor and Mr. Coney, now kept strict watch at the door, insisting that the passenger's name was Dr. Boza, not General Diaz. The General was given large doses of laudanum, which resulted in checking the dysentery. During the two days that the steamer lay off Tampico the purser carried, piecemeal, part of his clothing to the prisoner. On the third day the barometer began to rise; and the purser knew they would leave on the following day. He made up his mind that on that night he would have to remove Diaz from his room into his own. He told him so, and further requested him to be dressed in the clothes he carried him, and to leave his own clothes in a heap in a corner. He had instructed the American doctor, who accompanied him and who really was his aid-de-camp, to throw a life preserver overboard, the intention being to convey the idea that the General had jumped overboard again, but this time with a life preserver. No one but Diaz and Coney knew of the intended place of concealment; and even the mail agent, Mr. Zamora, supposed he had jumped overboard with a life preserver.

The night was a very stormy one,—a terrible norther blowing, accompanied by heavy squalls of rain; and the Mexican officer on duty at the stern of the vessel to watch the supposed Diaz would invariably run to the lee side for protection whenever a gust of rain and wind would come up. The General's room was away aft, while the purser's room was adjoining the pilot-house forward. It was necessary then to take him out of his room unseen by the sentry or any one. At eleven o'clock that night the purser made his rounds, watching the officers of the regiment. The superior ones

were in their staterooms in bed, some of the others in the social hall, and others in the smoking-room playing monte. As he went the rounds he watched the officer on duty as sentry, calculating the time it took him to run from his post to the place of protection, and made up his mind that he had plenty of time to get the General out of his room without being seen. At about half past twelve o'clock he thrust his hand into the General's room, caught him by the arm, and drew him out while the officer was running from his post to the shelter. The purser shaded the light with his body until he got the General to his room, where he immediately placed him in his wardrobe, which was so narrow that he could neither stand up nor sit down, but was obliged to remain in an awkward, cramped position.

Coney immediately went out to hunt up the American doctor, and found him in the smoking-room. Lighting a cigar, and making a motion for him to come out, he told him he had gotten the man away, and for him to throw the life preserver overboard, letting someone else discover the fact of the absence of the General, find his clothes and the loss of the life preserver, and for him to stay in bed until

President Diaz of Mexico.

that was done, all of which he did. On retiring Mr. Coney took the General out of the wardrobe and bade him lie down upon his bed, suggesting that he needed some sleep; but Diaz could not sleep. They then consulted regarding a plan of action, deciding that once they agreed to do a thing he would carry it out, obeying Coney implicitly in everything. At about four o'clock that morning Diaz insisted upon going into the wardrobe, leaving the purser to undress and go to bed.

At about seven o'clock Coney was awakened by a loud knock at his stateroom door. His servant spoke through the lattice blinds, saying that the officers of the regiment wanted to speak with him. Coney told him to put his hand through the window, open the door, and to let them in. When they entered they found the purser undressed and in bed, with unmistakable signs of a man just awaking from slumber. The officers were greatly excited, and told him that the man had jumped overboard again in the night, with a life preserver. Coney affected great surprise, and expressed very considerable doubt as to his having jumped overboard, insisting that he was still on board the ship; and he offered, if they would excuse him a moment, to get up and dress and hunt for him. Hurriedly dressing himself while they were in the room, he took them out, down in into the engine-room and coal-bunkers, and made them do the searching until they were heartily tired and sick of it and insisted upon giving it up, then he would find some other place to look into, until finally they gave it up from sheer fatigue, being satisfied that he had nothing to do with the escape of the "Crazy Doctor," as the purser always insisted upon calling him.

The greatest difficulty now was to get food to the General. As the purser was not accustomed to have his meals served in his room he did not dare to have any sent to him; and all Diaz got to eat during the two or three days that he was in the wardrobe was what Coney could take unnoticed from the table at meal time; yet he never expressed a feeling of fear, nor ever complained or gave any sign of impatience. The place where he was confined was so small that he could not move with comfort; and on account of the soldiers probing through the lattice blinds, with their bayonets, to see if they could steal some of the purser's clothing, the General ran great risk of losing an eye or having his hiding-place revealed. That night, as soon as the purser could get to his room, which was about eleven o'clock, he took the General out of the wardrobe and had him lie upon his bed, while he kept guard until morning. Diaz then returned to his hiding-place; and the purser undressed and went to bed, sleeping for an hour. The difficulty of this concealment can be imagined when it is known that the vessel was a small one, with nine hundred soldiers with their women on board; so that it was almost impossible to move about the decks.

The night before the arrival at Vera Cruz, the colonel of the regiment called Coney to his room, saying that he wished to speak to him. He went, and a sentinel was placed at the door so that they should not be interrupted. The colonel then said that while he was grateful for all the kindness he had extended him and his soldiers during the trip, he was sorry to see so bright a young man exposed to the danger of being shot; and the fact that it would be better to sacrifice one man's life rather than one hundred thousand. He appealed to his sense of humanity and to his self-interest to reveal the hiding-place of General Diaz, or tell him whether it was really the General or the "Crazy Doctor." He said that, if he did not, he would certainly lose his life, and that in the civil war which would follow the escape of the General many lives would be sacrificed.

Coney listened patiently until he had finished, and then said in effect:

"Colonel, you know as well as I that it was General Diaz and not the 'Crazy Doctor;' and if you had known how to do your duty he never could have escaped. You have nine hundred armed men on board. The ship has a crew of but fifty-two. It would have been an easy matter for you to have taken him prisoner; and your Government would have either given you money satisfaction, or would have saluted the American flag. You would have been praised and promoted; but now he has escaped you. I fear more for your safety than I do for mine."

The colonel blanched, and said, "What shall I do?"

"Why," said the astute purser, "report that it was the 'Crazy Doctor' who jumped overboard with a life preserver. Make a demand for his clothes and property in my possession, and you will come out clear."

The colonel then asked whether he could depend upon Coney, who told him that his interests were at stake, and that that was his guarantee. He also told him to call his officers together and forbid them talking any more about this man, or about his being General Diaz, all of which the colonel did.

Early the following morning the steamer entered Vera Cruz, when the real difficulty began. The purser told the General that inasmuch as he had brought him that far safely he would guarantee to take him to Havana or New York just as well, and that he had better consent. Diaz said no, that his duty called him ashore, and that now or never was the time for him to make the attempt to free his country from the tyranny of the actual Government. He asked Coney if he knew any one on shore with whom he could communicate; and the first name the latter mentioned was that of an intimate friend, now Governor of the State of Vera Cruz, General Enriquez. Coney agreed to communicate with him, and then left to see about the mail; and as soon as it was put up and in slings to go over the side of the vessel he went to Zamora, the mail agent, and never let him leave his side for a moment. The latter's eyes were red and swollen, as he had just heard of the death of his friend, General Diaz, whom he thought had jumped overboard; and he was a picture of distress.

As soon as the health officer reached the side of the ship, and the purser had given him a bill of health, the mail began going over the side into the mail boat. As the health officer came up the steps purser Coney caught hold of Zamora and rushed him down, hurriedly whispering to him, "General Diaz is on board. Tell General Enriquez to send some one immediately." With that he pushed him into the boat, and shoved it off with his foot. Zamora never attempted to get up from where he had fallen, but simply stared at the purser in blank amazement. Arriving at the mole, the first man he met was General Enriquez, to whom he gave the message and sent a lighter-man to the purser immediately with a note, telling him to send the box of arms with the bearer. Coney showed the note to General Diaz; and as it was not in the handwriting of his friend he asked Coney if he knew the man who brought it. The latter replied that he did, and that he could trust him. In the mean time the purser had asked the house-boatman to get him a suit of his clothes, promising that, if he could get the suit within half an hour, he would give him an ounce of gold. In less than half the time he had them there; and General Diaz had them on, and was ready for the last play in the dangerous game.

While the exchange was being made a knock came at the purser's door. Diaz leaped into the wardrobe. The purser opened the door and let the colonel of the regiment in, who said he had been thinking over what Coney had told him the night before, and that, although he was perfectly willing to carry it out, nevertheless he wished to make one more effort,

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Consul-General, Republic of Mexico.

which was that he was authorized to offer purser Coney fifty thousand dollars if he would reveal by sign where General Diaz was concealed. He further stated that he had in his regimental box seventeen or eighteen thousand dollars, and that he would send for the balance ashore, which he could have there in an hour, if Coney consented. Coney could not afford to appear insulted, which he really was; so he simply laughed and told the Colonel that the General had certainly jumped overboard, as he well knew, but added, "Even if I knew I would not tell you." The Colonel then went out, and Coney let the General come out of his hiding-place. He told him how it was arranged with the lighter-man; that he had three hours in which to perfect his plans, and that he could get him ashore safely, as it would take all of that time to get a cordon of soldiers down to Vera Cruz to prevent his escape and to have the ship guarded so that no one could come on board or go ashore from the ship. Coney instructed him, that when he opened the door he was to follow him down into the steerage without looking back. Coney would pretend that Diaz had done him some wrong; and he was to follow, shrugging his shoulders. When once below he was to take hold of a bale of cotton and roll it out toward the porthole just like the other lighter-men, and to jump out with it into the lighter.

When Coney concluded his instructions, Diaz asked for a piece of paper, which was given him, and he began to write. Mr. Coney asked him what he was going to do. The reply was, "Although you see me in this shape, I can do as much for you as that Colonel who offered you fifty thousand dollars." The purser replied that he had taken no offense at the colonel's offer, because he made it in compliance with his duty; but that he, Diaz, had no right to insult him, as he never would risk his life for money. The tears came to Diaz's eyes, and he threw his arms about his liberator, saying that from that day he was his brother, and that while he had two shirts one would be his.

In the mean time the soldiers were being disembarked, and all the officials of Vera Cruz came on board; for the rumor had spread like wildfire, much to the dismay of Coney, that the General was on board. Every moment was making it more and more difficult for him to get the General off; and he repeated his offer to carry Diaz to Havana, which he refused. At last Coney managed to get the lighter, that belonged to his friend the lighter-man, where he wanted it; and, after repeating his instructions to the General, he said, "ready?" Diaz answered "yes," and Coney took his door and swung it back violently and stepped out, followed by the General, who was the embodiment of nerve. Coney at once began abusing him in Spanish as he would one of the lighter-men. They had to go a distance of about thirty feet forward, then around the pilot-house down the stairs to the steerage, where the lighter-man was waiting for them.

On reaching the foot of the stairs the lighter-man said, "Where is the box of arms?" Coney answered, "This is it," pointing to the General. The lighter-man rushed to the General, raised his hat and recognized him, and immediately wanted me to hide him in the machinery of the ship or in the coal-bunkers, saying that at night he would come after him. This Coney refused, reminding the General of his promise to carry out to the strictest letter what once they had decided upon, and telling him that he had three hours to go ashore with perfect safety. Diaz promised, and turned the corner. Coney left and went upstairs, got out his papers for the house, and immediately went to the hatch and looked down, where he could see General Diaz turning a bale of cotton with the men. He watched him until he saw that he got out of the porthole, and then went to the side of the ship and cast off the line. The tide

swung her out, and she got beyond their reach, to the indignation of the first mate.

The chief of police now came to Coney and made a formal demand to search the ship. He was referred to the captain, who gave his consent; and they searched the ship from top to bottom. To the great indignation of all Coney's shipmates he helped him search for Diaz, an act that was most trying for him, from the fact that all his shipmates thought he was trying to find out where the General was concealed in order to give him up for blood-money. They would not speak to him, avoiding him and in every way showing their contempt and disgust at his supposed position. They thought that he was trying to deliver over to death a man whose life had a price placed upon it; but afterward, when the truth was found out, they made more than ample amends. The clothes of the General, and his pocket book, except a gold chain which he wished Coney to deliver to his wife so as to verify what he would tell her, were given over to the chief of police.

The information that Coney had refused fifty thousand dollars came to the knowledge of the then President of Mexico, Mr. Lerdo, who said that no American would refuse fifty thousand dollars, for he would sell his own father for that money. Consequently it was a mistake: Diaz was never aboard the vessel. This helped General Diaz indirectly; for it relaxed their vigilance and kept them still in doubt as to whether he really did or did not come on that vessel.

The General got safely ashore; but before landing he was able to hear at the mole the instructions given by the commander-in-chief of the military forces in Vera Cruz, this enabling him to know how to avoid capture. Diaz made his way into the interior, to Oajaca, on foot, and there met his friends. He organized an army, and at the battle of Tecoac defeated the armies of Lerdo, and entered the capital of the republic, from whence Lerdo fled. From the battlefield of Tecoac he wrote Mr. Coney a letter, telling of his triumph, calling him his brother, and insisting upon his coming to Mexico on the return trip of the ship. Mr. Coney had a pressing invitation to go to Mexico, which he accepted. When he arrived he stopped at the United States Consulate, and on the following morning was awakened by President Diaz, who came dressed in full uniform with his full staff. As he awakened Coney he said, with a laugh, "You did not used to sleep so sound on the steamer."

Diaz gave the purser a reception worthy a king, and renewed his protestations of friendship and brotherhood, thus forming a friendship which has never been broken. Mr. Coney's act has resulted in what may be termed the making of Mexico, as under the wise administration of Diaz the country has stepped at once into the front rank of nations of progress, and commands the respect of the world.

THE RECENT DISTURBANCES IN CHINA.

By Frederic J. Masters, D. D.

CHINA is again passing through one of those periodical outbreaks of fanaticism, violence and unrest that have already given so many black chapters to her nineteenth century history. There are times of tranquillity when she is seen cultivating the arts of peace, encouraging Christian teachers and foreign traders, constructing railroads and telegraphs, starting new industries, opening her buried minerals, and extending her commerce; and we congratulate ourselves that her night is far spent, and the time of her redemption draweth nigh. Then comes a reaction, characterized by an insensate hostility and even brutal violence to those whom she yesterday honored as benefactors. It is all very discouraging; but we need not despair. To regenerate a nation of such hoary antiquity, a population of such surpassing density, and a people of such deeply engrained habits and superstitions, is a work so immense that it need not surprise us if many upheavals and perhaps a great disintegration should take place before her reconstruction is accomplished.

Nothing has happened since the Tientsin massacre of 1870 that has caused such widespread alarm as the anti-foreign riots now taking place along the Yangtsze Valley. The troubles began in April last, with the destruction of Roman Catholic property at Yangchow. This was followed a few days afterwards by a riot in Wuhu, a city on the Yangtsze River, about a hundred miles from Nanking. Here again the Roman Catholic Mission was first attacked, the buildings battered down, the premises looted and the inmates driven out. The fine cathedral, hospital and mission houses were all ransacked and burned. The *émeute* fortunately passed off without loss of life. In a few days the excitement spread to the important city of Nanking. High Government officials friendly to foreigners warned them of the coming storm, and succeeded in getting the European ladies and children out of the way. They had hardly reached the steamer lying in the roads when mobs simultaneously attacked, looted and fired the Roman Catholic Mission, the Methodist-Episcopal Hospital, the Presbyterian Mission and other foreign establishments. The timely arrival of the military prevented a wholesale destruction of property and perhaps loss of life. On the 7th of June a more serious disturbance took place at the city of Wusueh some three hundred miles farther up the Yangtsze, an attack being made upon the Protestant Missions while the missionary gentlemen were away in the country. Defenseless English ladies and children, accompanied by their faithful native servants, were driven into the street and assailed with sticks and stones. Beaten and wounded, they fled to the mandarin, who refused to succor them, but were finally sheltered by Christian Chinese. Two Englishmen who came to the rescue were brutally murdered, one being stoned to death, the other hacked to pieces by the swords of the mob. Two days afterwards an outbreak occurred at Kiu Kiang, about twenty-five miles farther up, where an attack was made upon the premises of the American Methodist Mission. The officials here acted with commendable promptitude; and when the American and German gunboats appeared the rioting had been suppressed, and the Chinese soldiers were found guarding the Mission property.

The whole Yangtsze Valley was now in a state of ferment; and every day brought tidings of disaffection and trouble in distant places. The local

mandarins could not be relied upon to protect foreigners. Gunboats of different nations were sent to the various ports; and foreign residents organized themselves into corps of defense. Vigorous pressure was also brought to bear upon the government of Pekin to obtain indemnities for loss and guarantees for the better protection of foreigners in the future.

Hopes were now entertained that the storm had passed over; but it was only the short lull of the center of a typhoon. On the 2d of September, without any warning, a serious riot took place in the city of Ichang, one of the newly opened treaty ports. The American Episcopal Mission, the Roman Catholic Convent, and the Scotch Mission-house, were sacked and burned, and the customs and consulates attacked or threatened. After two days' rioting, in which all possible damage had been done, the military appeared in great force and mounted guard over the blackened ruins.

A series of riots had now been carried on along the Yangtsze River, with very little interference from the authorities, in which foreigners had been massacred and much valuable property had been destroyed. The Government at first did not take matters to heart. Had not America and Russia, in excusing their anti-Chinese and anti-Jewish riots, maintained that a nation had the right to exclude objectionable aliens? Such an argument could but embarrass our ministers at Pekin. But the authorities now felt matters had gone far enough. The foreign ministers were aroused, and there were threats of armed interference. Liberal indemnities were promptly paid to the sufferers, several officials were degraded, dismissed or banished, and numbers of rioters were arrested and beheaded. The higher officials issued proclamations threatening with instant death any one caught molesting a foreigner. Above all, the Emperor issued a decree, the most remarkable document that has ever emanated from Pekin, almost extolling Christianity, and describing missionaries and their converts as "good and peaceable people," who must not be molested. This edict has been published throughout the empire, and remains on record as an Imperial testimonial for all time of the excellency of the Christian religion, the merits of its teachers, and their right to carry on their benevolent work in China.

After another short lull serious disturbances have broken out in Mongolia, not far north of the great wall. Full particulars have not come to hand at the time of writing. It appears that the rebels are not Mongols, but Chinese colonists and brigands, forty thousand of whom are led by Li Hung, the son of an ex-rebel chief who was executed some years ago. The Belgian Missions have been attacked, several foreign missionaries killed or wounded, native priests cut in pieces, and hundreds of native Christians cruelly martyred. It may be remarked that some anti-missionary newspapers in this country, in commenting upon these shocking outrages, have apparently been convinced that, after all, there are some native Christians in China. It is satisfactory to note the telegraphic announcement that the Imperial troops have been victorious, and that the rising in the North has been put down.

The question now arises, What caused these disturbances?

At first the rising seemed to be directed against the missionaries and the Christian religion. The same old stories heard just before the Tientsin massacre, about Roman priests scooping out babies' optics and hearts as materials for the manufacture of foreign drugs, have been circulated on this occasion. The literati of Hunan have been employed for several years in the publication of the vilest and most blasphemous literature. Anything more abominably indecent, or more calculated to incite an inflammable people against Christians, could not be imagined than these lying tracts and obscene broadsheets. One paper recited

the foulest slanders about priests and nuns; another tells how Chinese girls are drugged and debauched by missionaries; another describes how little children's eyes and bowels are made into medicine and photographic chemicals. That these scurrilous publications were a powerful factor in inciting the people to mob violence cannot be denied. But the anti-Christian riot theory has been generally discredited since the Mason event and the attacks upon custom-houses, consulates and mercantile houses. It is more probable that missionaries were attacked because they were foreigners, and also because their establishments were the most prominent foreign buildings in the place.

A theory has been put forth by a Mr. Drummond of Shanghai, who as early as two years ago predicted the present rising. He says that the recent troubles have been stirred up by secret revolutionary societies that have long been swarming in the Yangtsze Valley; that these society men have made war upon foreigners, not from any special animosity to them, but with the idea of embroiling the Government of China with Western nations, and provoking a foreign war, which would afford them a favorable opportunity for an open revolt against the

His Imperial Majesty Kwong Sui, Emperor of China.

Government and the overthrow of the Tartar rule. This theory has been accepted by many prominent officials, both Chinese and foreign. But in the light of facts at present available this explanation is hardly reasonable. The leaders of the rebel societies must have sufficient intelligence to know that foreign powers have no quarrel with the Manchu government as such, so long as it is friendly to us and faithful to its treaty stipulations. But when it becomes evident that the ruffians who have attacked foreigners are also rebels, and rebels that the Government is too weak to suppress, it needs no prophet to foretell how ready the aggrieved powers would be to join hands with the Imperial forces against a common foe, and crush the villains who had thought to make the massacre of foreigners the stepping-stone to a revolution.

Her Imperial Majesty, Empress of China.

The most active and most influential secret society in China to-day is the Ko lo Hui, or "Association of Elder Brothers." It is a branch of the Hung league, whose origin was described in the January number of this magazine, and is a sister of the White Lily, the Triad and other revolutionary societies in China; and of the Chee Kung Tong or Yee Hing Hui of the United States. Its object like theirs is the

re-establishment of a native dynasty. The Ko lo Society is largely composed of men from Hunan, by far the most turbulent province in the empire. They were formerly soldiers who were employed to put down the rebellion, and who subsequently followed Tso Tsung Tang on his victorious Central Asian campaign. Flushed with victory they returned home and formed themselves into a benevolent society, in many respects resembling our "Grand Army of the Republic." When the Government, owing to financial straits, saw fit to disband this force and stop the veterans' pensions, there was trouble. The Ko lo's soon degenerated into blackmailers and rebels, forming themselves into marauding bands that made a prey of wealthy landowners, merchants and gentry. All the loafers and vagabonds of the district rallied to a society that was strong enough to plunder rich villages and homesteads, or levy heavy tribute and subsidies. So influential has this organization become that its power extends through the provinces of Kiang Su, An Hui, Hunan, Hupeh and Kiang Si; and wherever its emissaries are found it has become a standing menace to public peace and the stability of the Government.

For a long time evidence has accumulated of a deep laid Ko lo plot to drive all foreigners, the Manchus included, out of China. The late Marquis Tsing, formerly ambassador to England, was a Hunan man; and during the time he was viceroy of Nanking he managed to keep the rebels in check. One can hardly credit the statement of Mr. Drummond, that, in consideration of a monthly subsidy of fifty thousand ounces of silver paid by the Marquis into the Ko lo treasury, it was agreed to have no trouble during his lifetime. That no anti-foreign troubles took place during the lifetime of that singularly pro-foreign statesman is more likely accounted for by the great personal influence of the Marquis, and the universal respect entertained for him in his own province, as well as throughout the empire. Since his death in November, 1890, the rebels have lost no time in coming to the front.

The plot that was unearthed last September, in which several foreigners figured so ingloriously, shows they are in earnest, and in command of funds as well as men. A large consignment of first-class arms and ammunition was seized on a coast steamer; and Mr. Mason, a customs official, was arrested with a twenty-five-pound packet of dynamite in his possession, supposed to be intended to blow up the Imperial palace. Be that as it may, the rebels are evidently intriguing as did the Taepings to get mercenary foreigners into their employ by tempting offers of pay; and but for this fortunate discovery, seizure and arrest, China might at this moment have been convulsed with civil war.

The rebel cause had another set-back in the capture of one of their leaders. Chen Kin Lung had been traced to an inn in Soochow. In the middle of the night a simultaneous dash was made upon him by the police; and before he could alarm his comrades he was seized, gagged and carried in chains on board a steamer for Shanghai. On his person were found a poniard with a poisoned blade and some compromising documents, in which he was addressed as the Eighth Prince. Three examinations were held; and, after unavailing efforts had been made to induce him to divulge the conspiracy, he was put to the torture. The chieftain bore all with unflinching fortitude. At last he broke silence with these brave words: "Your excellencies may spare yourselves the trouble and me the pain. I am not the only one ready to lay down life for this cause. My head, flesh and bones are yours. Take them and end this farce. Do not deceive yourselves with the hope that I will ever betray my confederates or deny a cause that will bring untold happiness to our country for a thousand generations." One cannot repress a feeling of admiration for this

brave fellow. He had only to tell what he knew, pilot the police to the headquarters of the conspiracy, assist in capturing the rebels, implore the Imperial pardon, and he might have risen to military renown as other renegades have done. But the intrepid

His Excellency Li Hung Chang, Viceroy of Petchili and Prime Minister of China.

warrior preferred death to dishonor. An iron hook was thrust into his collar-bone; and he was led forth to execution, where he bravely met his death.* No wonder that the Chinese Government shrinks from provoking a conflict with such desperate men.

To return to the causes of the disturbances. It seems plain that the attitude of the Ko lo Hui is anti-foreign. The Hunan people, of whom this society is so largely composed, are the most arrogant and exclusive

* About twelve years ago, during the writer's residence in China, he was involuntarily the witness of a rebel execution. The sickening sight will never be forgotten. Ten poor wretches, heavily chained and half-stupefied with samshu, were carried in baskets to the execution ground. Each rebel had a label pinned to his neck describing his crimes. The culprits were dumped upon the ground and compelled to kneel in a row with heads bent towards the north, as if in submission to the Emperor. The district magistrate arrived, the sheriff held up the warrant flag, and the execution began. The executioner, a pale-faced, wiry-looking man, came forward with a sharp, heavy knife about four feet long. The blade fell with a dull thud upon each neck. At each fall of the knife a head went spinning off, and the headless trunk fell forward. Death was swift and sure. Ten heads had gone off in less than thirty seconds. There was a momentary twitching and quivering of muscles, and all was over. Next day the heads were stuck upon poles on the tower over the gate of the city, as a warning to others.

people in the empire. They claim to be of pure Chinese blood, the true sons of Han, and look with haughty disdain upon the Chinese of the South and the West as if they were "foreign devils." Emperor, missionary and merchant must go, because they are foreigners. They have long boasted that their province is the palladium of the empire, that no foreigner has ever found a footing in their midst, and that their people have never been and never shall be contaminated with foreign ideas and foreign innovations. The people are imbued with the most inveterate hate of the foreigner, his religion and all his works and ways, which is intensified by the publication of the scurrilous anti-foreign literature already referred to.

The ignorant classes have been taught to believe that the foreign-devil kings are plotting to conquer China and parcel it out amongst themselves, and that when the foreign merchants have impoverished the country with opium, and the missionaries have deluded the people with false doctrines, the conquest of China will be accomplished. The propagation of such slanders about foreigners is very exasperating; but it must be confessed the Chinese have had much to provoke their hostility; at any rate they have had little reason to be grateful to us.

The whole history of foreign intercourse with China has been hatefully cruel and unjust. Foreigners forced themselves upon China at a time when she desired nothing better than to be let alone. Her ports were bombarded to open markets for our commerce. The most attractive sites in her open ports were taken as residences for our merchants. Bloody wars were waged with China to force her to legalize a trade in opium which the Emperor To Kwong saw would bring moral and financial ruin to her people. There is no doubt that whatever treaty rights we enjoy in China to-day have been obtained at the point of the bayonet. We have forced ourselves into the coast ports, into the interior, and even into the very capital. We have talked and blustered as if the country belonged to us. We have stalked through the land, trampling upon Chinese prejudices, shocking their conventionalities, and outraging their cherished traditions. For nearly a century we have bullied and plundered China. We have set up our autocratic settlements and our extra-territorial rights; and when China has dared to murmur we have shaken our fists in her face and called for the inevitable gunboat.

Time passed, and her people began to come out of their shell. They dared to claim the right to emigrate to Western lands, just as Western people have gone to China; but they made money out of us, just as our merchants make money out of the Chinese: and we have told them to go. We treated her merchants as the scum of the earth, and insulted her ambassadors at our very gates. We have enacted exclusion acts and anti-Chinese ordinances that place these people under cruel disabilities, and which would call out every ship in our navy if the Chinese did such things to us. We have looked calmly on while mobs have invaded their settlements, broken into their homes, plundered their property, and massacred people as defenseless as babes, whom we had bound ourselves by treaty to protect. Yet after all this we are disappointed that China has no strong affection for us. Forgetting the scores of murdered Chinese whose bones lay bleaching on Wyoming hills, we burn with vengeance over the massacre of two white men in China. The only wonder is that the Chinese have not long ago risen up and swept every foreigner out of their country. We Anglo-Saxons are indeed a nice lot of people!

This anti-foreign sentiment will explain, too, the Ko lo rising against the Government. The offense of the Manchu Government is not that they have ruled worse than a Chinese dynasty would have done, but because they are foreigners. Although the Manchus came to the throne 250 years ago, the

Execution of Rebels.

Emperor is a foreigner in language, habits and customs. The garrison of the cities is also Manchu, and has its Tartar town, almost as foreign to the Chinese as the English government and European settlements in India are to the Hindoos, and just as little disposed to assimilate with the people whom they have conquered. That all this is an eyesore and a humiliation to the national pride of many Chinamen cannot be denied.

It is true that under the rule of several Manchu emperors the country enjoyed signal prosperity; and the people on the whole were happy and contented. But the present sovereign's reign has been seventeen years of misfortune,—sufficient to shake the people's faith in the claims of Kwang Sui to the title of "Son of Heaven." The terrible famine fifteen years ago, the enormous loss of life and widespread distress from the Yellow River inundations, the frequent ravages of pestilence, the agricultural distress, the badness of the tea trade, the corruption of officials, and other troubles, have combined to make the people of Central China discontented, and encouraged that superstition, so thoroughly Chinese, that the reigning monarch is not a favorite of Heaven, and that a new dynasty might bring happier and more prosperous times. On the whole there seems good reason to conclude that the cause of the present disturbances is the demand, so fashionable nowadays, for home rule, with the stirring battle cry, "The 'foreign devils' must go: China for the Chinese!"

It is hardly within the range of probability that the Ko lo rebels will ever succeed. The recent crushing defeat sustained by the marauders outside the Great Wall a month or two ago is a lesson that the Hunan rebels will not fail to take to heart. They must know that the Imperial Government is in a better position to cope with an insurrection to-day than thirty years ago, when the Taeping rabble swept the country with fire and sword. The old-time army of ragmen armed with bows and arrows, or rusty spears and blunderbusses, has given place to a smart, well-disciplined modern-equipped force, trained by German and English drill instructors. The army of Petchili, the Black Flags, and the Pekin field force, are a well-armed, efficient and thoroughly contented body of troops undoubtedly loyal to the reigning house. The old war junks with batteries of "stink pots" have given place to modern ordnance of Krupp or Armstrong's best make, and a fine fleet of ironclads, cruisers and torpedo boats that rank high among the navies of the world.

It is safe to predict that this modern army and navy will be able to give a good account of itself should the present incipient rising shape itself into a definite and organized revolt. A rebellion of undisciplined rustics or even of the disbanded braves of Hunan would have little chance of success except in the event of the Imperial forces being diverted to repel a foreign invasion; and this is not likely to occur as long as wise counsels prevail among the diplomats at Pekin. However provoking be these outrages upon foreigners, the powers will rather exercise a little patience than plunge China into a state of anarchy that would overwhelm every foreign settlement in the country.

As to our attitude toward a rebellion characterized by such violence against foreigners, there can be but one opinion. The Taepings, professedly friendly to Christians, rallied to themselves a great deal of sympathy which the Ko los will never get. However slow, conservative, and perhaps corrupt, the Government may be, the interest and duty of foreigners lie in supporting the present administration. It at least symbolizes order, and is certainly better than anything the rebels could place in its stead. Any one who remembers the awful bloodshed, widespread misery and appalling desolation that followed in the track of the Taepings will never wish success to any

more revolutions in China, at least as long as her people are heathen.

We think it our duty to sympathize with home rule, and the overthrow of monarchies; and we take for granted that our system of popular government is adapted to every people under the sun. But is any one silly enough to suppose that the Chinese people are prepared for popular government, that China would be better ruled by a Ko lo government, or that the lawless hordes of Hunan could set up a more intelligent sovereign than Kwong Sui? The fact is that no rebel party has ever risen in China that has shown the least capacity for administration, or promised any reform of the abuses of the present system.

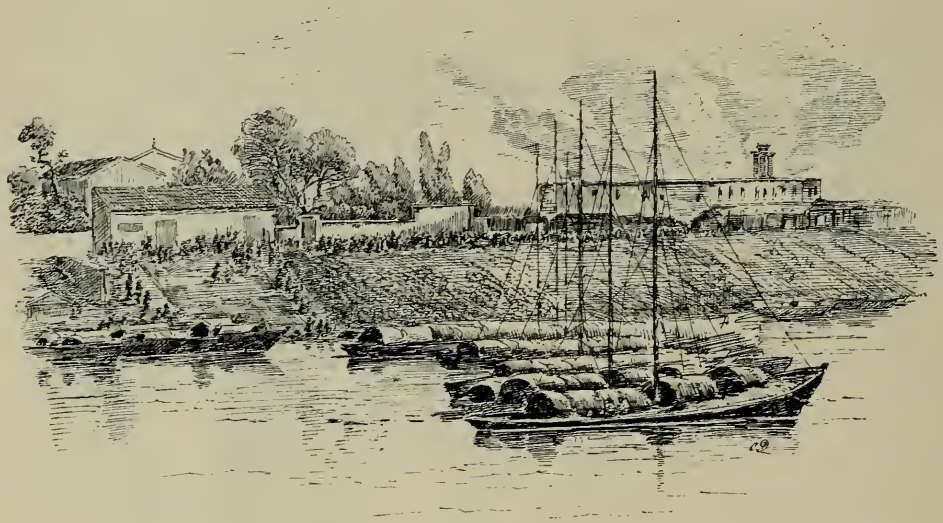
There are men in China to-day of brilliant genius, high character and commanding influence, either of whom would adorn a throne; but they are inflexible in their loyalty to the Manchu emperor. The most powerful man in China is Li Hung Chang, Grand Secretary and Viceroy of Petchili,—the man whom General Grant called the Bismark of China; the man who has given China a modern army and navy, shipyards and arsenals; and the man who believes that fifty years hence China will be strong enough to withstand Europe. Next to him comes Chang Chee Tung, Viceroy of Houkwang, a statesman who hates foreigners but likes their methods. Both these men are favorable to reform; both are jealous of the other's power. The dynasty is in no danger from them. There is no statesman in China to-day whose loyalty is doubted, or who would be so crazy as to put forth aspirations to the throne in the face of tribal animosities and provincial jealousies that would rend the empire to pieces.

Wrecking the Episcopal Mission at Ichang, Upper Yangtsze.

All things considered, the present Emperor and system of government are as good as anything China is prepared for at present. His Majesty is a young man twenty-one years of age. Brought up in seclusion, very little is known of him personally. His father, the enlightened Prince Chun, watched over his education and took pains to set before his son the necessity of cultivating friendly relations with the countries of the West. Foreign ministers who were present at the audience

in March last when the Emperor, departing from all the traditions of the dragon throne, received the Western ambassadors on equal terms, speak of him in the highest praise. He is described as having a face of marked refinement and intelligence. He was dressed in a plain official hat and a silken robe embroidered with a gold dragon, this simplicity of attire being in striking contrast with the gorgeous uniforms of his courtiers. The little that we know of the Emperor is decidedly favorable to his character and reign. He has shown a deep solici-

denationalize the Chinese or interfere with their religions, laws and customs. They have adapted themselves to Chinese traditions of royalty, have fashioned their court after the model of the ancient kings, and accepted the great principles of government laid down by Confucius and Mencius. The people have not been intentionally oppressed by excessive taxation or unjust laws. They can voice their grievances through legally appointed censors, whose duty is to criticise any errors of administration, and even rebuke the throne when necessary.



Chinese Burning the Roman Catholic Mission at Ichang.

tude over his people's troubles, and an intelligent interest in whatever can promote their welfare. He has been more faithful to treaty stipulations than our Government has been; he has promptly issued decrees in favor of foreigners; and he is now reported to be diligently studying the English language, and to be in sympathy with the party of progress.

The Manchu government is not so bad after all. Judging by Oriental standards, its emperors have reigned with ability, rectitude and humanity. If they remain Tartars in tastes and habits they have never attempted to

The Government has also shown its fairness in allowing the Chinese, who are the preponderating element in the civil service, a large share in the work of administration. These officials are no vulgar politicians,—the creatures of a political boss. They are educated gentlemen who have been chosen for their ability and advanced to office by a system of competitive examination that is a pattern to the civilized world. A government that can boast of such a system is not so irremediably bad as some foreigners would have us believe. That Chinese officials are corrupt cannot be denied. But are our boasted

higher types of government characterized by any superior purity? Throwing stones at corrupt Chinese officials may do some havoc to our own glass house. Everybody admits China has room for reform. It would be a good thing, *inter alia*, if her mandarins repented of their extortions, and gave up the cruel habit of torturing prisoners.

The Chinese Government will learn before long that it will be to their interest and credit to devote the enormous sums so frequently paid as indemnities to foreigners to the improvement of their police force, paying better salaries to officials; to relieve congested districts by colonizing sparsely populated territories; to open up her mineral wealth; and to construct railways and other public works.

To expect a nation of four hundred million conservatives, with institutions that have been crystallizing for ages, to be carried swiftly along the path of progress, is asking what is unreasonable. There must be no violent wrench from the past. Slowly, cautiously, discreetly, will China's regeneration be worked out. The present Government is sufficiently enlightened to see its people's needs, and can be trusted to heal the nation's sores, remove the causes of popular discontent, and adopt that policy of reform that shall ere long usher in the brighter age of individual liberty, national safety, and the increased comfort and prosperity of its people.

Santa Barbara Bay from the Coach Top.

A FOUR-IN-HAND IN SOUTHERN CALIFORNIA.

By Charles Frederick Holder

OS ANGELES, the Queen City of the South, is the metropolis of Southern California, which, speaking generally, may be said to include that tract of country from Santa Barbara County to the Mexican line, though a broader division would include a much larger area. Los Angeles was the starting point, the center of radiation for many of our coaching and riding trips to Santa Barbara and beyond, and through Southern California to the adobes of Tia Juana. To see Southern California effectively the trip should be made by coach, carriage or on horseback. The finest of roads extend all over the country, inviting one to the old ranches, cañons, ruins and Missions that cannot be seen from car windows.

It was a mere conceit, perhaps, but remembering that in the olden time pilgrims and travelers in this fair country found a Mission at the end of nearly every day's journey from San Francisco to San Diego and beyond, we determined to emulate the ancient custom and go over the old roads; not on horseback, as did the old Californian, but in a four-in-hand, making as nearly as possible a Mission every night, seeking the hospitality of its secularized walls in reverential fashion, as did the traveler of the last century, yet receiving it for obvious reasons perchance at the neighboring ruin.

The plan had not only an essence of romance and novelty to commend it but was within the possibilities, the ecclesiastial chain being as follows, beginning at Santa Barbara:

Santa Barbara Mission, founded in 1786, by coach to the Mission of San Buenaventura (1782), thirty miles. From Ventura to Mission of San Fernando Ryz de Espana (1797), sixty-four miles. From San Fernando to the Mission of San Gabriel Archangel (1771), via Los Angeles, thirty-five miles. From San Gabriel to San Juan Capistrano (1776), thirty miles. From San Juan to the trio of Missions of Pala, Rincon, and Panba, about sixty miles. Pala to San Luis Rey de Francia (1798) thirty miles. San Luis Rey to the Mission of San Diego de Acala (1769), fifty miles, these figures being approximate and in the main correct. Not only could these Missions be reached in a single day's journey, but good hotels, often the best, were available. This, with the guarantee of perfect roads, good weather, and choice scenery made the trip one of more than pleasant anticipation.

The four-in-hand was not running on time; there were no relays to be met; hence the attempt to make a new Mission every night was not directly adhered to, though the ecclesiastical route was followed literally as outlined, with many an interesting side-trip to cañon, seashore and mountain range.

Under such inspiration a jolly party bowled toward the Santa Barbara Mission one morning, and reined up under its ancient walls. The "outfit" was a modernized California coach, the plethoric boot packed with hampers of good things; rifles for the black-tailed deer and shotguns for the valley quail, while four or five grey and stag hounds following were suggestive of coursing, with the hare and coyote as objectives.

According to a calendar, which the young lady on the box seat carried,

Down by the Mission of Santa Barbara.

it was that thoroughly uncomfortable period midway the Christmas holidays and the first of March, when, in the East, thaws and violent freezes follow each other like avenging Nemeses; yet here nature seemed conspiring to impugn the testimony of the records. It was winter as the seasons go, but to all intents and purposes midsummer in Southern California. The breeze was coming in from the Pacific, sweeping up the mesa of the old town, bowling over acres of golden poppies, robbing the fields of wild forget-me-not of their odor and carrying it over the Mission wall, to mingle with the incense of the church. The driver called it a winter day; yet as he flecked his leaders and the horn gave an answering note to the meadow lark on the Mission wall, there was not one in the party who really believed that the Ides of March were near at hand.

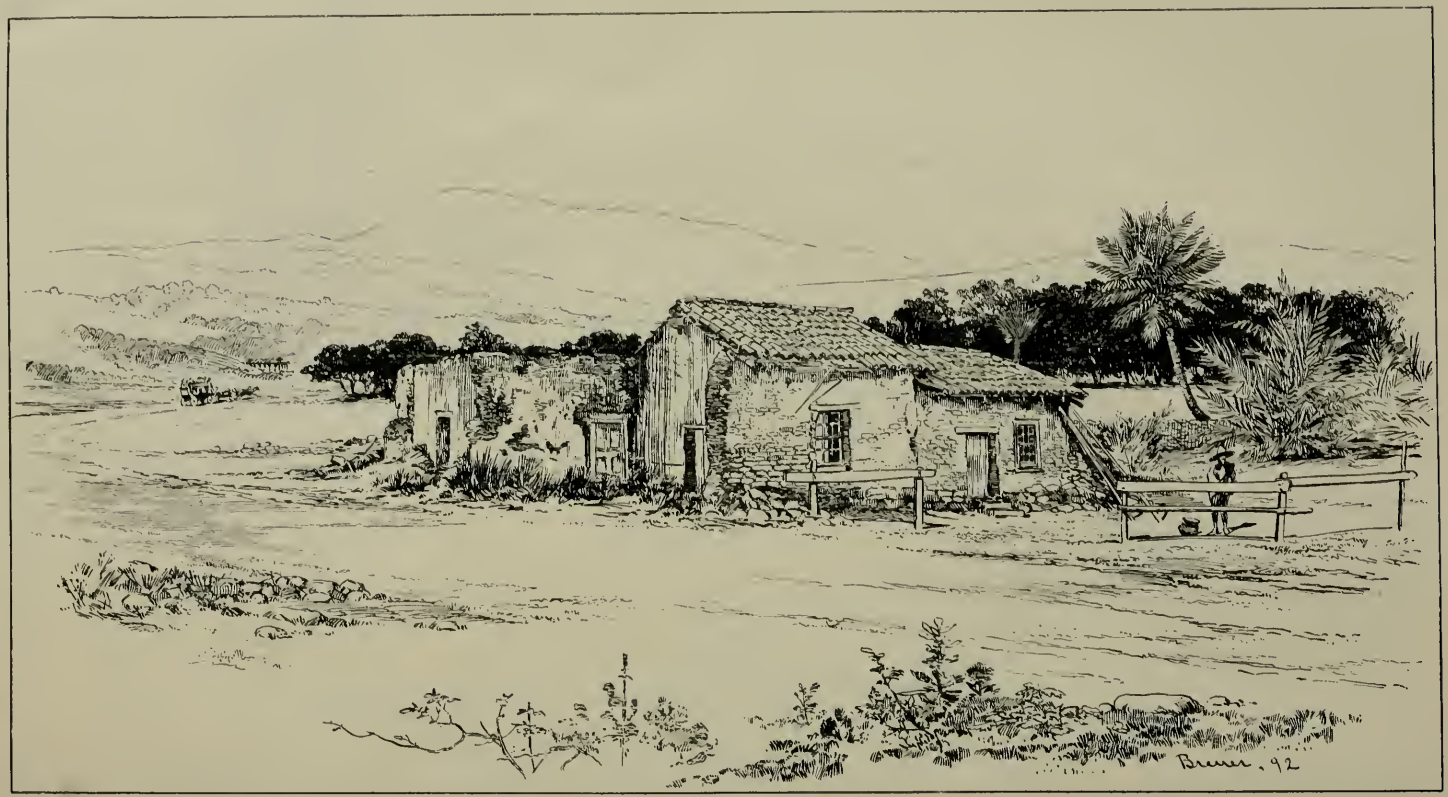
From the highlands about the Mission the first view of Santa Barbara is obtained. The Pacific is before us, stretching away to illimitable distance, the crescent-shaped beach facing the south, from which reaches back the intervening town with its broad streets lined with palm, pepper, magnolia and a wealth of semi-tropical plants and trees. To the north extends the Santa Ynez Valley, the blue ocean on one side, the mountains to the other, while to the south and east deep groves of orange, lemon and lime tell of El Montecito and Carpinteria.

It was at the Mission that the complete supremacy of man was demonstrated, as, after interviewing the courteous Fathers, the gentlemen of the party were invited into the Mission garden, while the ladies rested in the outer hall, consumed with curiosity. No woman had ever entered the garden, so it was said; and the old gardener, gowned and cowled, laughingly told of the pretexts adopted by fair visitors, who evidently believed that the grim walls concealed some deep mystery.

The Mission of Santa Barbara is the only one that has never been out of Franciscan control, and is one of the finest in the State, standing as it did a century ago when its bells rang the Angelus, their echoes calling the faithful up the deep cañons of the Santa Ynez.

The father told us of the ancient splendors of the church, of its inception by Junipero Serra, its erection in 1786 by Father Antonio Paterna, and detailed its completion in 1794. In 1810–12, he said, it was nearly destroyed by earthquakes, but was ultimately rebuilt. We entered the old dormitories, the workshops once filled with native artisans; stood on the red-tiled roof, and looked down upon the broad arched corridors where the Fathers walk and read; strolled among the ancient graves of the founders, and tarried in the chapel with its quaint decorations while the Father whispered the history of the treasures upon the walls. He told us of the struggles of the Fathers, the act of the Mexican Governor in 1827 in freeing the Indians, resulting in the destruction of the revenues of the Mission; of the desecration that accompanied the demand for secularization, and various efforts at confiscation. In 1833 the Government succeeded, and the Missions were converted into secular curacies. Later the Missions fell into the hands of commissioners, and in 1834 the public literally seized the Mission lands. We listened to the story of the successive phases of the struggle, of the times under Don Juan Alvarado, who, it was claimed, plundered the Missions, of the attempt in 1840 to restore the Missions to power, and of the act of Pope Gregory XVI, in the the same year, making California a bishopric, and many other moves, resulting to-day in the Missions being, instead of centers of ecclesiastical power, simple parish churches.

The Mission as a whole is a delight to the artistic eye. The cell-like rooms, the ancient and worn stone pavements, the crude doors with huge iron trappings, the high windows, enormous walls, the odor of ancient sanctity, all



Down by Spanish Town.

tend to complete a historical picture of the greatest interest. Without, the commanding front with its two towers of stone and adobe pierced with arched doors, the lofty façade with its finely cut columns, the time-worn statues of the saints above, make the pile at once striking and impressive. No little architectural and artistic skill was shown by the builders. Especially does the stone fountain in front, with its round basin and quaint carvings, attract the eye. Near here was an adobe bath-house, in the façade of which a lion's head was carved, from which once poured the clear water of the Santa Ynez. In fact, it is evident that the builders of the Mission were men of artistic feeling; and the old building reflects credit upon their memory.

But we have tarried too long. A number of dark-eyed penitents are waiting for the Father by the confessional, and after handing an ancient nail or spike of the old Mission as a memento to one lady, a photograph of the church and some flowers from the garden to others, the Father disappears to banish the past in the sins of the present generation.

Santa Barbara reminds one of some of the Mediterranean resorts, and has been compared to Nice; but the comparison is hardly just. The American resort has the advantage in climate, is always delightful, winter or summer, but has none of the artificial decorations of European places. Its winter mean is 54.29; that of Nice 47.88; its summer mean 67.71; that of Nice 72; its difference between winter and summer 13 to 24 of Nice. Again, the Santa Barbaran, or Barbarian of the saints, as the young lady on the box-seat calls our host, tells us that the hot, burning winds of Southern Europe are never known here,—that this is the only paradise, the real land of *dolce far niente*, the home of the gods.

The quiet old town with its fine hotels, long asphalt-paved streets, its miles of gardens, shops for the sale of curiosities, its Chinatown, where the odor of opium and firecrackers mingles with the perfume of flowers, its long wharf, yachts and vessels, all offer inducements to tarry. Spanish-town still remains inviolate, and we stop at the old De la Guerra mansion, where Richard H. Dana witnessed the marriage festival in 1836. The family is still in possession, and the house, with its open court, adobe walls and tiled roof, still resembles the description in "Two Years Before the Mast." We buy a *reboso*, an Indian basket, from an old Mexican woman, some of the stamped-leather articles for which the place is famous, half a dozen fiery tamales from another old woman, for luck, the driver puts it, and are away up the fine, hard road to La Patera, where the Indians buried their stone mortars and household gods in the long ago.

Near here we drive through the fine ranches of Hollister, Cooper and Stowe, the former known as "Glen Annie." "Ellwood," the Cooper homestead, is famous for its olive orchard,—the largest in Southern California, also in America, with works the perfection of neatness, over which the courteous host takes us. The home is embowered with flowers from every clime,—a garden the year round. From here we pass for several miles up the picturesque little cañon by the side of a stream and beneath trees that were young in the days of the Franciscan padres, and finally at the head of the ravine halt for a consideration of the well-filled hampers which the coach is made to disgorge; for this is a feature of coaching in Southern California,—the mid-day meal is carried, and a picnic is enjoyed in some nook or corner that may meet the eye.

From this region endless trips can be made to glens and eyries which, in their beauty, compare favorably with those of European resorts: the Gaviota Pass, the Valley of the Santa Ynez, the mountains rising to the east, while to the west the ocean is seen, here and there,—a reminder of the extremes that Santa Barbara

Fording the Stream.

affords. Here the lover of the picturesque may spend weeks without exhausting its beauty. But we are off again, rolling down to the beach with its long line of shining sands, calling to mind our own New England shore. But here, the Santa Barbaran tells us, the water on this February day has a temperature of 61 degrees, about that of Newport in June. Tourists are enjoying the surf; the beach is gay with riders, while the castellated rocks on the north are dotted with strollers from the hotels. Over beyond the blue stretch of water that formed the Santa Barbara Channel rose the Channel Islands, the smallest — San Nicolas—having a peculiar interest. In 1836, we are told, the last Indians were taken away; but as they were leaving a squaw ran back to get her child, and for some reason was left and abandoned. In 1856, twenty years later, George Nidever of Santa Barbara landed there on an otter hunt. To his surprise he found huts of whalebone, and near one an old woman, dressed in a garb of skins and feathers. She presented a weird appearance; her language was unintelligible. Nidever took her to Santa Barbara, where every attempt was made to find some one who could talk to her, but without success. What became of her child no one knew. The "lost woman" died three months after her rescue, and was buried by the Mission Fathers, — unknown,—a mystery of a lost people.

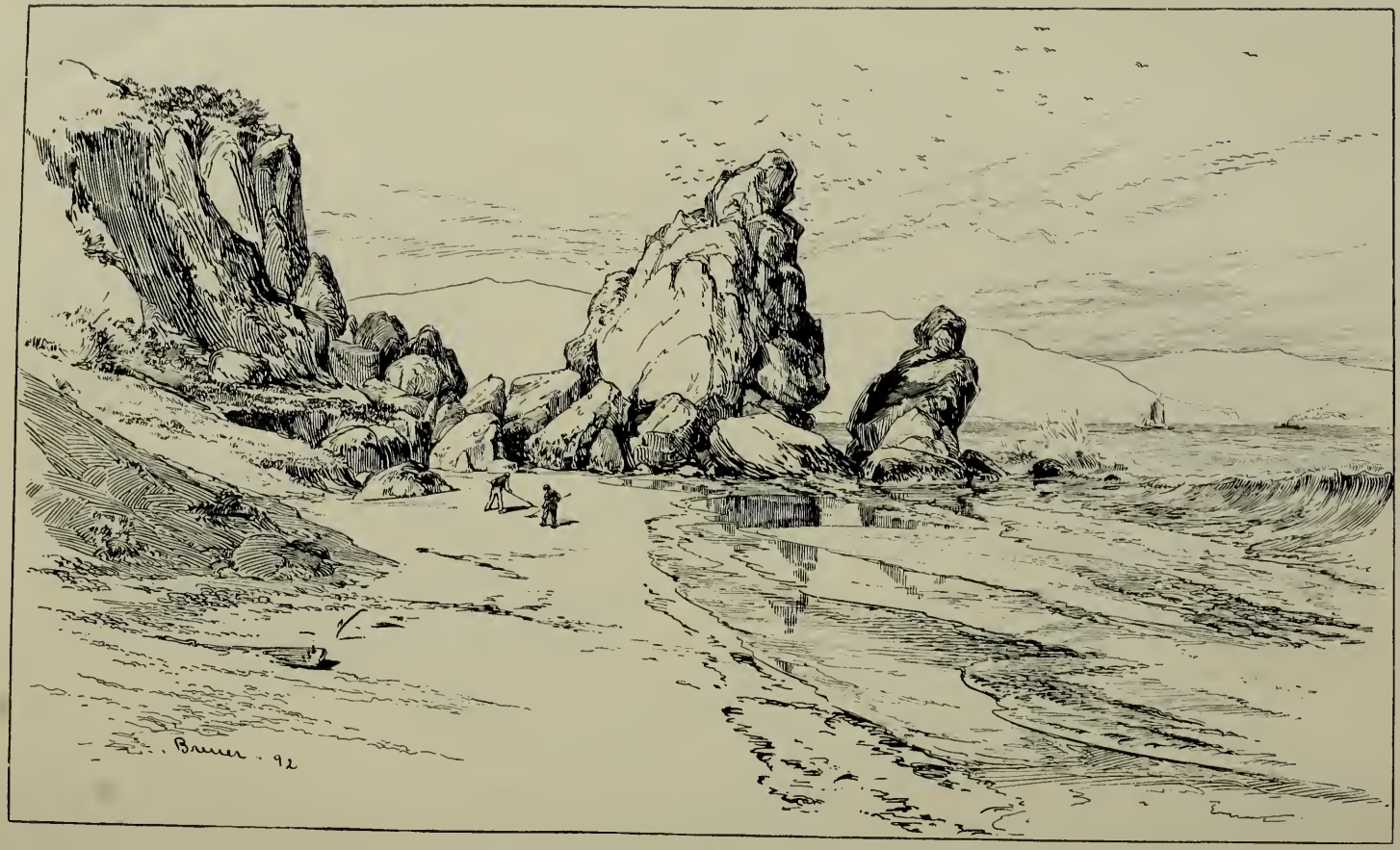
We could have reached the famous Ojai Valley, thirty-seven miles southeast from Santa Barbara, through the Casitas Pass, but preferred to go by the Mission of San Buenaventura, thirty miles away. This took us through the delightful suburbs of El Montecito, with its hot sulphur springs far up the cañon, thirteen hundred feet above the sea, where the Indians resorted years ago, by nooks and corners of the Santa Ynez, the San Marcos Pass and the Painted Cave and Rocks.

The stage road winds along the edge of the shore, now desecrated by the rails of the Southern Pacific, gleaming sandy crescents succeeding one another in endless variety. Through the orange groves of Montecito we enter Carpinteria and its slopes. Here a peculiar patch of black ground being plowed by a Mexican catches the eye of a scientific coacher, who pronounces it the site of an ancient Indian village. The Mexican stops work as the coach slows up, leans upon his plow, and while rolling a cigarette sententiously answers the questions thrown at him singly and in pairs. After much solicitation he finally enters the adobe near at hand and returns with some of the results of his plowing,—ancient relics turned up in former barley seasons: a stone mortar, some abalone shells, the holes stopped with asphaltum, the dishes of the Indians, bits of soapstone with perforations, arrowheads of flint, and, horror of horrors! a flute that some ancient disciple of the muse has manufactured from the arm-bone of possibly a kinsman. It is rudely made, and ornamented with bits of pearl from the abalone. Beads of shell and a flint knife complete the treasures of this collection.

"Who were these people?" asks some one on the top of the coach.

"No sabe, señor," puffs the Mexican.

He might have said that his house was resting on a veritable *kitchen-midden*, a townsite, graveyard, and what not of the early Californians Juan Rodriguez Cabrillo met when he sailed up the Santa Barbara Channel nearly three hundred and fifty years ago. He could have said that the adventurer found this land the site of many villages, where lived thousands of happy natives. He might have told us that his ancestors were of the party, and that they buried the great captain, Cabrillo, on San Miguel over yonder, where he still sleeps. But he said nothing, and looked in stolid amazement at the volubility and learning of the American whip of the strange vehicle.

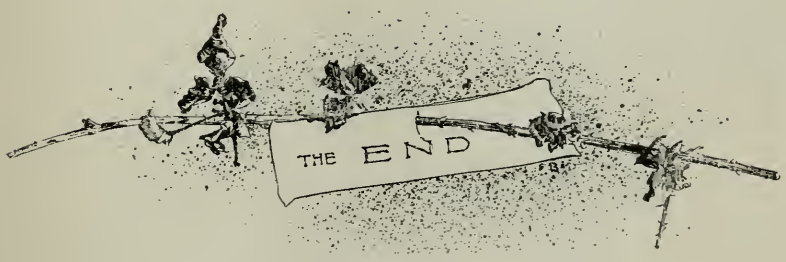


Stopped by Castle Rock.

Our road follows the beach through Carpinteria, past sand-dunes where rich grasses grow, where the faint track of sea-birds is seen and the roar of the surf breaks gently on the ear. Beyond is the ocean, smooth as glass, with beds of kelp floating lightly,—the resting place of the gull and otter; over beyond the sail of a Chinese junk, the smoke of an American steamer. On we pass, the ocean to the right, the green slopes of the Santa Ynez on the other side, through little cañons that reach down to the shore, playing a veritable game of hide-and-seek with the gleaming ocean. Now the adobe of some Mexican ranges into view, with its barren, well-worn dooryard; its ramada and garlands of chilies, red and glaring, its hairless dogs, and dark-eyed children who have never seen a red and yellow coach and stare hard and long, silent at the melody of the horn.

Down we plunge into the little arroyo, splashing across the clear brook that, with its sparkling sands and dashing trout, comes gurgling down under the arches of elder and willow; up the bank with a rush, winding through a grove of live-oaks where the tap tap of the woodpecker echoes and the gray squirrel flashes his fox-like tail; out into the fields again, the road lined with yellow violets, with crazy-quilts of color,—bluebells, cream cups, daisies, poppies, bluettes and other wild-flowers galore, reaching far up to the manzanita and wild myrtle of the upper slopes. From the hillside comes the melody of the valley quail, then the roar of its wings. The nest of the wood-rat hangs on a limb. The air is filled with insect life dancing lightly in the sunbeams.

And so on we go, over the same road that Father Junipero Serra and Governor Felipe de Neve with their guard of sixty soldiers passed when marching to found the Presidio of Santa Barbara one hundred and nine years ago, and with a final burst we ride bravely into the old town of Ventura, cross the shallow river that creeps lazily out from the grove of alders and willows, round the big hill that divides the town, and passing the shadows of the old Mission of San Buenaventura seek the more material comforts of the inn of the roses.



Bird's-eye View of San Francisco Showing "The California."

ART IN HOTELS.

"THE CALIFORNIA."

By George Alfred Sherwood.

WHAT New York is to the East, San Francisco is to the Western country,—a city of cosmopolitan make up, remarkable prosperity and a center of energy and enterprise. Probably more tourisits visit the city than any other spot on this continent. It is the magnet which draws people to the Coast. Being so far from the centers of refinement in the East, where all that money and taste can provide is seen on every hand, it might naturally be supposed that San Francisco was lacking in many of the modern elegancies; but such is not the case. A glance over San Francisco to-day by the visitor who has not been here for two or three years shows a growth phenomenal in the extreme; a view of the city from the house-tops shows a magnificent city reaching out in every direction. The homes and electric roads have climbed the hills and are reaching out to the sea, so that in the near future all the area between the Pacific and San Francisco Bay will be covered. A glance around shows here and there new buildings rising above the city, such as the Mills building, the *Chronicle* building, and to the

Main Office, Looking East.
Finished in Antique Oak.

north the building of "The California" hotel, considered the finest piece of work on this continent.

This building illustrates as well as anything the advance made by the city in the last few years. No city in the world has a more perfect or artistic hotel; and its citizens may well take pride in pointing it out to strangers.

San Francisco is essentially a city of hotels, being, as I have said, the center of the tourist travel; and it would only be natural that an attempt would be made to excel all other efforts in this direction. There are larger hotels, many covering a greater area; but none are more complete in all that goes to make an artistic whole than "The California" of San Francisco, which embraces every convenience suggested by modern hotel science.

The New Yorker or Chicagoan will feel especially at home in "The California," as its genial manager is none other than Mr. A. F. Kinzler, who has a more than national reputation as the former manager of the Hotel Brunswick of New York and the Auditorium of Chicago. "The California" is in the practical center of the city,—within five minutes' ride of the princely residences of Nob Hill, and the best resident portion, yet equally accessible to the various depots and ferries. On entering, whether it be the main entrance, the theater, or the various private entrances, one is immediately struck with the feeling that here is a hotel with everything pertaining to it, yet so arranged as to convey the impression of an elaborate and magnificent private residence; and this feeling holds in whatever portion

Ladies' Parlor.

Bird's-eye Maple and Mirror Panels.

of the hotel the visitor finds himself. From without the edifice is a monument to hotel science,—a magnificent structure rising eight and a half stories, with two towers, which give it a finished and attractive appearance, while the neutral tints of the stone and pressed brick give a most pleasing and artistic effect. I have strolled through most of the hotels of Europe, but none impressed me as this. There is an air being rich antique oak, conveying an impression of great solidity. Here is a fire-place of the good old-fashioned kind, liberal in space, inviting in appearance. Near by is the gentlemen's reading-room, of Moorish design or suggestion, supplied with the literature of the day.

Adjoining is an attractive smoking-room; the wine-room, that is famous for its cellar; while a late innovation is the

Ladies' Music Room.
Finished in Bird's-eye Maple.

of completeness and artistic harmony peculiarly attractive, which must be seen to be appreciated. All the apartments have been made a special study by a true artist; and the result is a series of surprises as you pass from one room to another. The office is a study in itself, a fine large room, containing approaches to other apartments. In its furnishing it is at once solid and beautiful, the woodwork

table d'hôte for guests and others, that has become extremely popular, "The California" being the fashionable resort for lunches and dinners among those who are epicurean in their tastes. Each of these apartments has attractions peculiarly its own; yet when the elevator is taken and the parlor floor is visited it is seen that there is an evolution in the splendor of the appointments,—that they increase as we

go upward. The woodwork of the second floor is bird's-eye maple; and as we step into the hall it might from the richness of its appointments be the private residence of some connoisseur of art. The parlors with their rich tints are gems, and are well shown in the accompanying engravings. Of especial interest is the music-room, which is circular, about thirty feet in diameter and fitted in the most elaboration of all the rooms single and *en suite* is a bewildering study in tints, colors and artistic furniture; and in every room from top to bottom this same taste at once luxurious and practical is apparent, all the apartments having all the modern electrical appliances, duplicate sets of bells and other conveniences. The third and fourth floors are in sycamore; the fifth and sixth in red birch; and the seventh,

The Restaurant of "The California."

ate manner with all that taste and money can provide, the bric-a-brac, statuary and bronzes being from the choicest collections. This room is not the only one designed for the ladies: they have an artistic reading and writing room, elaborately furnished boudoirs in all the term implies. In fact everything that the eye could wish for has been supplied to render life here ideal and perfect. An inspec- eighth and ninth in natural oak, giving a most pleasing variety. Here high up awaits a fresh surprise, a ladies' conservatory, abounding in rare flowers and a wealth of tropical plants.

Here too is the elaborate banquet hall, where some of the most important and fashionable events of California social life have occurred. Here parties from the wedding feast to the theater party are served; while

elaborately fitted private dining-rooms serve for occasions more limited. Here also "The California" makes a notable display, its reputation for fine linen, cutlery, glass and exquisite taste in this direction being world-wide. The wine cellars alone have attracted the attention of connoisseurs, the private stocks of the best cellars of the world having contributed their treasures to make it perfect. So with the kitchens, cold-storage and other departments in the basement. The aim has been to attain perfection in hotel service, and the result is success. When upon the top floor one cannot fail to be struck with the elaborate appliances for protection against fire that Manager Kinzler has provided. The building itself of stone, is fireproof, and is lighted throughout with electricity from the hotel's private plant, giving 2,000 lamps; while in case of accident to the electric light a perfect system of gas has been supplied. Even if fire was possible, the guest is shown two separate lines of fire-escapes in front leading from the roof to the street below, while in each room is an automatic device which notifies the office of any unusual rise in temperature. Pumps are at hand, and hose is always attached ready to be used by the well-drilled corps of employés, who patrol the many halls all night, reporting to the office at intervals by the automatic clocks. In a word absolute security is assured.

"The California" makes a specialty of its restaurant and *table d'hôte*, the room being one hundred and twenty by thirty, and with its tiled floor, gleaming electric lights, the music of the orchestra and rich decorations, affords a vision of beauty that attracts hundreds each day to the *table d'hôte* who are not regular guests. The lover of billiards finds here the finest tables; in fact nothing has been omitted to render this hotel the most complete expression of the hotel-builder's art in this country or Europe. For the features referred to, and its complete sanitation, I congratulate Mr. Kinzler upon this his last supreme effort, and commend "The California" to all who desire so much excellence at the same rates one finds at other hotels. I should unhesitatingly pronounce "The California" the most perfectly appointed structure of the kind in the world, one well calculated to give San Francisco an international reputation as a city of hotels.

San Francisco, Feb. 25, 1892.

Questions of the Day.

THE BOYS' BRIGADE.

EXPERIENCE has taught us here in San Francisco that the swiftest and surest way to gain control of the lawless element is to strike at the source of the evil by educating the little children from the very cradle. Humanitarianism has tried the reformatory, the Sunday school, the reading-room, the public school and the club; but the influence of all these has been but temporary and wholly uncertain in its results. Even with the kindergarten there is one serious drawback: it releases its hold upon the child too long before he has reached years of independent thought, discretion and discrimination, and leaves him to battle as best he may against evil home influences,—the pitfalls of a world into which he is too often forced as a bread-winner long before he is out of short trousers, and where, surrounded by companions old and hardened in vicious ways, he can scarcely look upon his kindergarten training as anything more than a dream or a memory.

With the middle and upper classes the public school supplements the kindergarten idea; and, if the parents have the means, the public-school discipline which tides the child over the most trying years of his formative period brings him under a discipline that is a pillar of strength in all his after life. The children of the poor frequently become bread-winners at a very early age. Not having known either school discipline or home influence, their lawlessness, which, however, is not willful, becomes a serious menace to the community.

In Scotland and England, after exhausting every means known to the philanthropist to reduce this element to a subjective and law-abiding condition, some bright man conceived the idea of appealing to the love for the military which is born in every boy. He organized little companies among the gamins in certain localities, fitted them out with coarse military uniforms, furnished an armory, and placed the boys under the same discipline that controlled the gorgeous pageantry of the Queen's own regiments. He never spoke to his boys as boys, but from the very first addressed them as privates or by their official titles as the case might be. He had regular inspections made by uniformed regulars of the British army, and inflicted the usual punishment for all lack of attention to personal appearance, all breaches of order and absences from duty. His scheme has worked like a charm, and has been taken up by one philanthropic body after another until now the Boys' Brigade, as it is called, numbers in England and Scotland alone a membership of eighteen thousand enthusiastic young soldiers. They have their reading-rooms, their coffee-rooms, their coöperative lodging-houses, and their places of amusement, all in connection with the well-fitted-out armories where they find everything to interest and amuse them. This movement has brought about as much of a revolution in the lawless element of London and other large cities as the kindergarten has done in San Francisco.

Quite recently a magazine has been started in New York City under the most favorable auspices, for the purpose of establishing this same order in America. It is suggested that such men as President Harrison, Chauncey M. Depew, General O. O. Howard, Abram Hewitt, Anthony Comstock, Cornelius Vanderbilt, Geo. W. Childs, or other persons of equal influence and wealth, should be appointed on the directing board of the American brigade so as to inaugurate the work under the most favorable auspices. It is a matter of deep gratification to us to feel that San Francisco is again in the lead, and has, as far as we know, just completed the first drill hall for the Boys' Brigade that has been built in the United States. It was formally opened on the evening of February 8th, by Rev. J. Q. Adams, president of the Boys' Brigade of the United States. This movement ought to prove itself as much of a formative influence as the great free kindergarten system of which we are so justly proud. Our kindergarten system tells its own story so strongly that the city of New York, though rather late in the day, has decided to establish a system of free kindergartens there, and has invited Mrs. Sarah B. Cooper to go

and organize the system, offering to place in her hands as a working nucleus the sum of $50,000. What Mrs. Cooper has done for the kindergarten children will now be done for the boys of the West.

THE NICARAGUA CANAL.

In the present issue Captain Merry, the consul-general of the Nicaragua Republic at this city, begins a series of articles on the Nicaragua Canal. No question is more important to the people of this Coast to-day than this. It means everything,—a saving of time and money. Where there is one vessel in the ports of San Francisco and San Diego to-day there will be ten when the canal is a fact. Coasters from the Eastern States will find their way here, and business of every kind will increase; so that a new era of prosperity will begin. It is said by some, who oppose the canal for reasons of their own, that a railroad across the isthmus would fill the bill; but this is a short-sighted policy based upon ignorance. That a railroad there, is a desideratum cannot be questioned; but what railroad could transfer the cargoes cheaper than they could be carried through the Nicarauga Canal, by the ships that at present make the trip around the horn? In the present article and others to follow, the points upon which the great question bears will be plainly presented; and it is hoped that public interest in the work will be kept up, and the great work brought to a speedy consummation.

WANTED, AN ART MUSEUM.

It is somewhat remarkable that a city of the wealth, culture and refinement of San Francisco is so devoid of any expressed art interest. An artist whose work has the stamp of genius recently told the writer that it was impossible for an artist to earn a living in the West. This might be true in any city in the land; yet there is something to be said on the other side. As a people the residents of this great city have not done their duty. When a city creeps up to a population of three hundred thousand it becomes a debtor to the people in many ways, one of which is to devote a certain amount of its energies to the cultivation of the masses. In brief it should be the duty of the city or the people or both to do something to tame the human animal. Food, work and clothes are not the only necessities of life; man needs the refining influence that association with refinement and culture alone brings, to bring him up to the concert pitch of high civilization.

It is fair to say that in this city there is not one man in five hundred who is a good judge of art. Hundreds of fine homes in this State, and others in the Western country, are beautifully decorated externally. The genius of the architect has done its share; but when we come to the interior, where the taste of the owner is displayed, the visitor is amazed. A thrill of horror creeps down his back at the display of "paintings," the heterogeneous commingle ment of compound contrarieties and worse. Such exhibitions are disastrous to the moral sense of the people. The writer knows an instance of a man, who had previously never told a lie, who was brought face to face with a collection of paintings of this kind, and when pressed for an opinion by the proud owner was forced to express himself as delighted, when in reality horror possessed his soul. But this picture-owner was not to blame. He bought what pleased him from the dealers. He had no types or examples of true art to study, from which to formulate a standard; consequently he was humbugged, and was perpetuating his taste in his children.

All this is the direct result of the apathy of the people; and, to come to the point, this city should have a museum of art in all the term implies, where the standards could be exhibited in painting, etching and sculpture. The lack of such an institution is not merely a cause of regret, but is a disgrace to a city of the size and wealth of San Francisco. As to the causes why an attempt has not been made to establish such an institution we know nothing; but the fact remains that it is by no means a difficult task if undertaken in the right way and by the right men. The city should be willing to provide a building in the Park, and appropriate an adequate sum for maintenance, and lectures on art subjects by qualified men. The cost of buying collections and subjects should be borne by the society.

The Metropolitan Museum of Art and the American Museum of Natural History in Central Park, New York, are carried on in this way. The society was formed among the men of wealth and taste in the city, who gave large donations and yearly fees to form a fund with which to buy specimens; then members of different kinds were elected,—a yearly member list including any person who would pay ten dollars a year. The result was surprising: hundreds came in, and a large fund was accumulated. The same can be done in San Francisco.

At least five thousand persons should be found in this city who would pay ten dollars per annum to begin an art museum; while the men of great wealth, of which there are many, should come to the front; and an art museum would rise with a quickness that would surprise those who now think the plan impracticable.

Who will take the initiative? is the question

THE NAVAL OBSERVATORY CHIEF.

THE Naval Observatory at Washington is the objective at present of the small army of astronomers throughout the country. They have petitioned Congress to give the observatory a chief selected from the distinguished astronomers of the day instead of allowing it to remain in the hands of a naval officer, who has had no special training for the work. The question raised by astronomers is well taken, and if common sense prevails their petition will result in this important branch of the service passing under the control of some man whose life work has fitted him for it.

The change will not come without a struggle, but it is in the air and will become a fact in time. The selection of a director for an observatory is a most important question, and in Europe the most eminent astronomers are selected, as note the names of Flamsteed, Halley, Bradley and Airy of the English Royal Observatory; Cassinis, Arago and Leverrier of the French; Encke of the Berlin; and Wilhelm and Struve in Russia. These names are among the most distinguished in astronomical science. Some of the naval men who have had charge of this work have been a credit to the country; but it is evident that in a service of this kind a man can only attain perfection by making a life work of it. It is to be hoped that this position will be filled from the long list of eminent men who are members of the National Academy.

RAISE THE STANDARD.

THERE is room for a general overhauling in certain matters connected with the Government. At the present time we are supporting two expensive schools, one at West Point and the other at the Naval Academy. The taxpayers, the people, support them; and it is not improper that at times they should inquire if these schools are being utilized to the best advantage. At the very outset it may be said that they are not. These two schools produce better educated men than any university in the country. It is an impossibility for a man to graduate from either without being well equipped mentally and physically to represent the country,—a man of high honor, and a gentleman in all the term implies.

At present many graduates from the Naval Academy are being relegated to private life, because there is not room for them in the rank and file of the navy, which is on the face of it a waste of good material. We have in the Government a Coast Survey, a Revenue Marine and a Marine Corps, all employing officers. Whether it be a fact or not, the officers of these corps or departments have not the same standing as the officers of the line. Would it not be well for the Government to raise the standard of every branch of its service, and instead of educating a number of young men simply to turn them out into the world, to be called upon in time of war, to educate more and allow them to fill the vacancies in the several branches of the service. There is no reason why an officer of the Marine Corps should not be as competent a man as the lieutenant of the line, who stands beside him; but in many instances there is a vast difference. The man who fails at the Naval Academy, if he has influence, can, or could some years ago, gain access to the Marine Corps, the examinations for entrance to the latter being made lower; and to-day this corps is recruited from civil life. This is not as it should be. The standing of this corps should be immediately raised by recruiting its officers from the Naval Academy. So too with the Coast Survey and Revenue Marine; these positions should be given to men who have been educated for it, and our Coast Survey as well as others manned with officers who are graduates from the Naval Academy.

UNIVERSITY EXTENSION.

THE eagerness with which the idea of University Extension has been adopted in the United States is largely owing to the pioneer work projected by the Chatauqua circles and the countless summer schools of methods that have been the outgrowth of the Chatauqua course of study.

Here on the Pacific Slope, while we all have the ambition, the vitality and the receptiveness of mind that have been developed in more mature centers of culture, we have had so few facilities for expanding and stimulating intellectual action, that we welcome with an enthusiasm that is almost extravagant, these supplementary extension lecture courses.

In every new England village one may hear bright lectures, good readings and charming concerts all winter long. Here, while our population is all studying "at" something, it has never, until recently, made a practice of attending lectures and concerts; and even the most renowned speakers could not fill a hall or a parlor in any Western town or city.

The past year has changed all this with astonishing rapidity. The establishing of several new educational institutions, the active effort on the part of the University professors, and the responsiveness of the people, are doing in one year, what was the result of a quarter of century's effort in conservative England and lazy going New England.

NEW BOOKS

MISS ELIZABETH CURTIS, of the art school in this city, lately executed a set of illustrations of Jack and Jill of remarkable beauty and in exquisite taste. Miss Curtis followed the lead of Miss Thackeray, and idealized the personages in the old nursery rhyme, adding a few years to their ages, so that Jack is a well-grown lad, and Jill a sweet young maiden on the threshold of womanhood. Her pictures attracted the attention of the well-known connoisseur and patron of art, Mr. W. E. Brown, to whom the city owes the bronze statue of the ball-thrower in the Park; and, as he adds the gift of versification to the more solid qualities of a keen man of business, he wrote lines to fit the illustrations, and published the whole in one of the daintiest volumes ever issued on the Pacific Coast. The book is issued by William Doxey; and the proceeds of the sale go to the Silver Street Kindergarten, the first kindergarten established west of the Rocky Mountains. It is dedicated to Kate Douglass Wiggin, who founded that school on September 1, 1878, nearly fourteen years ago.

Mr. Brown has introduced the poem with a narration of the circumstance under which Jack and Jill were born; and this will be new to most of our readers. They were the offspring of the brain of Elizabeth Vertigoose, otherwise known as Vergoose, and finally as plain Goose, who on June 8, 1815, became the wife of Thomas Fleet, printer, of Boston, Mass., and subsequently made the acquaintance of all English-speaking nurseries by composing Mother Goose's nursery rhymes. Mr. Brown's rich imagination finds an allegory in the simple story:

Jack and Jill Went Up the Hill.

Jack and Jill
Went up the hill,
To fetch a pail of water;
Jack fell down
And broke his crown,
And Jill came tumbling after.

He sees in these quaint lines the tale of two ideal lovers,—too young to love wisely, but not too young to love well, who climb the hill in quest of happiness. Jack's fall symbolizes his surrender to Jill's charms; and she, in genial and sympathetic mood, comes tumbling after to signify that she accepts and returns his love.

They found new joys in every place;
The grassy fields seemed lovely parks;
And floating down etherial space
They heard the notes of unseen larks.

Thus hand in hand this loving pair,
On culinary thoughts intent,
Pushed out into the morning air,
And jointly braved that steep ascent.

having been fed on dry crusts. One sonnet, the most frequently quoted, rises above the general level and will bear reproduction:

A SEA GRAVE.

Yea, rock him gently in thine arms, O deep!
No nobler heart was ever hushed to rest
Upon the chill soft pillow of thy breast;
No truer eyes didst thou e'er kiss to sleep.
While o'er his couch the wrathful billows leap,
And mighty winds roar from the darkened west,
Still may his head on thy cool weeds be pressed,
Far down where thou dost endless silence keep.
Oh, when, slow moving through thy spaces dim,
Some scaly monster seeks its coral cave,
And pausing o'er the sleeper stares with grim
Dull eyes a moment downward through the wave,
Then let thy pale-green shadows curtain him,
And swaying sea-flowers hide his lonely grave.

Jack and Jill.

"At the Gate of Dreams" is one of the first of the volumes of verse to usher in the present year. James B. Kenyon's name is familiar to many as that of a prolific writer of magazine verse; and yet in all his work one finds but little to satisfy the real poetic sentiment. Perhaps it is because his forms of expression lean toward the material rather than the spiritual; however that may be, the poet-soul never bursts through its chrysalis and finds full expression. As a writer of prose Mr. Kenyon would doubtless have a smooth, flowing style, and would excel in the delineation of character pictures of the *genre* order; but as a poet he leaves us with the feeling of

Another bit that is perhaps as well known is an interlude, which begins:

Not every king may wear a crown,
Nor kingly be alone,
Whose heart beneath a purple gown
Throbs on a royal throne:
The kingliest spirits that have been
The world hath never known.

Quite different in poetic quality is "The Amazons," a heroic, dramatic poem following the Greek style, and written by Virna Woods, a Californian born and bred. One often hears murmurs of regret from those who have a genuine love of poetry, because of the decadence

of the heroic and the sympathetic in metrical composition. With the Howells school of fiction was inaugurated the supremacy of the *vers de société;* and yet how long does the memory of either school linger in our hearts, or how far does it exert any uplifting inspirational influence upon our lives. Walter Scott and Macaulay were machine poets; and yet the men who as boys were fed on Marmion and Horatius remember and can quote from those stirring poems to this day: but who, in the years to come, will find youth renewed in the rondeaus, ballads, triolets and sonnets of the present day? So it is with unfeigned pleasure that we welcome the occasional reappearance of the heroic in poetry. Miss Woods is not only thoroughly in sympathy with the Greek history that she ably handles, but she is an idealist as well. Her forms of expression have the fine quality that belongs to the poet who is born and not made. Men who have achieved imperishable reputations as poets have sometimes missed the divine touch of idealism. This fact is most patent in the two poets Milton and Dante. Milton was the idealist who stimulated the spiritual and the vague imaginativeness of his countless readers. Dante was the materialist who called forth in the minds of his devotees images of actual size, shape and appearance, where Milton's were indefinable and indescribable. Now in "The Amazons," quite apart from the dramatic quality which is almost inseparable from Greek heroic poetry, we find the poet and dreamer reaching out to our highest and finest soul-sense with the most exquisite delicacy.

We watch the rising of the sun and mark
Its upward path, and follow its descent
Below the earth; but, when we see the world
Slow moving in the orbit we call Time,
A broken arc is all that we behold,—
A fragment only of the mighty whole,
That orbs itself from ancient primal dawn
To the yet distant mystery of night.
How small a thing is one poor human life,
In the majestic unity that makes
The human race; and yet, when it is lost,
And like a sea-shell stranded on the shore
Lies at our feet, we feel more bitter pain
Than for the mighty multitudes of dead,
The driftwood of unnumbered ages gone.

* * * *

Like the dawn that melts away,
Drownèd in the heart of day,
Life is beautiful and brief;
Death the dropping of a leaf.

What could be more delicate than this description of Penthesilea the Amazon, lying silent in death?

Like a lily fallen
Lies she there;
Like the lily's pollen
Is her hair.

Rise her face and bosom
From her mail,
Like the perfect blossom,
Pure and pale.

Like a lotus blooming
In the reeds,
When, the shadows glooming,
Day recedes.

Like a white uplifted
Asphodel;
Like its petals drifted
As they fell.

MUCH might be done to stimulate a deeper love and appreciation for the art of the past, if there were more writers like Margaret Vere Farrington to supply the missing chain of poetic association which history and romance combine to produce in the mind of the somewhat too material modern art-fancier. In the real art-lover, association of events that have combined to produce a beautiful picture is one of the strongest elements; but to the rank and file a story printed or told is indispensable to evolve the halo and the glow which should always mellow the tones of canvased stories. In "Fra Lippo Lippi" there is an unusual descriptive power shown, rich in sentiment yet simple in treatment, that gives one the same feeling of restfulness and satisfaction that is to be found in the enjoyment of a home of refinement and wealth, where the appointments are perfect and elegant, but so well associated that one's only impression lies in the sense of grateful repose. Fra Lippo Lippi was a man, very human, therefore lovable; a genius, with all the instability, loyalty, tenderness and restlessness that is the bone and sinew of genius; not bad enough to be wholly condemned by the religious brotherhood that he deserted, yet not good enough to be of them. And Lucrezia? What more can be said than that she was a woman, very human, very childlike, very loving? She too was not fitted for the religious life, and she therefore laid aside the dark garb of the sisterhood for the equally sacred garb of motherhood and wifehood. And the atmosphere of Florence and the lesser Italian cities, with their crumbling cathedrals, their fading frescoes, their floods of sunshine, their patches of dirt and squalor, their smiling skies, their hillsides and vine-covered trellises,—only a hand that loved them could paint them with such a firm, tender touch; and only a soul that could feel the soul of the past, and that was a willing pupil in the midst of the strange monuments of the past,—only a dreamer and an idealist,—could invest the silent skeleton with a living, breathing body once again.

THERE was a time when the good old-fashioned farmer laughed to scorn the city-bred gentleman who bought an adjacent tract and talked about analyzing soils, supplying deficient chemical elements, and making brains do the work of hands wherever it was possible. In these days, however, farming has become as much of a profession as medicine or the law. We have chairs of agriculture in our universities; and, while the financial condition of the farming class has not undergone any remarkably favorable evolution, the general status of the farmer and his family has risen mightily in the scale of civilization Recently on effort has been made to introduce into the schools a text-book on the "Principles of Agriculture," compiled by I. O. Winslow, A. M. It is an admirable little work touching upon the leading facts and principles of chemistry, natural philosophy, geology, physical geography and botany.

"AN ABANDONED CLAIM," by Flora Haines Loughead, is a charming story for young people. While the human kaleidoscope does not bring into the experience of many of us such children of sterling qualities and mature judgment as these that are woven into Mrs. Loughead's story, yet there are such, and they deserve to be immortalized as ideals to stimulate the less self-reliant ones. Such a book is the best book a parent could give to a child; for this is a tale of real life, real adventure, real hardship, and real triumph over circumstances. As to the picture of farm life that it gives,—I am sure Mrs. Loughead will forgive a furtive simile; but we who have had our little experience have not found oranges, figs, apricots, green peas and the like responsive to anything save unlimited capital and eternal vigilance,—even here in balmy California!

"MOTHER'S HELP AND CHILD'S FRIEND," is an excellent hand-book for the family, touching as it does upon the many phases of the physical, moral, mental and spiritual development of children from the earliest infancy to maturity. It abounds in helpful hints that cannot fail to meet the questioning demands of all classes of parents. The author, Mrs. Carrica Le Favre, is well known in New York as an advocate of the Del Sarte system of expression. She has recently taken editorial charge of one of the departments of a new magazine in New York called *The Beacon*.

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1. "Jack and Jill." Adapted by W. E. Brown. Illustrated by Elizabeth Curtis. William Doxey, San Francisco. $2.50.

2. "At the Gate of Dreams." Rev. James B. Kenyon. Charles Wells Moulton, Buffalo, New York. $1.00.

3. "The Amazons." Virna Woods. The Chautauqua Century Press. $1.00.

4. "Fra Lippo Lippi." Margaret Vere Farrington. G. P. Putnam's Sons. $2.00.

5. "Principles of Agriculture." I. O. Winslow, A. M. American Book Company.

6. "An Abandoned Claim." Flora Haines Loughead. Houghton, Mifflin & Co. $1.25.

7. "Mother's Help and Child's Friend." Carrica Le Favre. W. T. P. A., Chicago.

EDWARD S. HOLDEN, LL. D.
Director of Lick Observatory

THE CALIFORNIAN

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NICARAGUA—THE GATEWAY TO THE ATLANTIC

BY WILLIAM LAWRENCE MERRY

THE Republic of Nicaragua lies between Honduras and Salvador on the north and Costa Rica on the south. It has a coast line on the Atlantic ocean of 250 miles, and on the Pacific ocean of 185 miles. From ocean to ocean it is 200 miles wide on its northern boundary, and 120 miles wide on its southern boundary. The Republic extends from latitude 10° to 15° north. Its area is 49,000 square miles (about three times the area of Switzerland), and its estimated population 400,000 souls. Its eastern coast was first sighted by Columbus in 1503. It was first visited and explored by the Spanish military adventurer Gil Gonzales Davila in 1522. In 1821, the five Central American Republics, including Nicaragua, became independent of Spain, and formed a confederacy which was dissolved in 1839, since which they have been independent. The Republic derives its name from Nicaraô, a powerful native chief, found on the shores of the great lake by the Spanish discoverers, who called the lake Nicaraôagua, from which easily came the abbreviation—Nicaragua.

From Cape Horn to the Arctic ocean a monntain chain rears its peaks between the oceans, under various names, but always the same longest of all mountain systems in the world. But in Nicaragua there is a freak of nature. The mountain range is broken in continuity and decreased in elevation. Two great lakes, Nicaragua and Managua, depress the continental backbone and furnish the lowest level between the Atlantic and Pacific oceans, from Cape Horn to the Arctic ocean, 153 feet above mean sea level. The next lowest is at Panama, 295 feet, and the third at Tehauntepec, 855 feet. There are also two low summit levels below the Panama isthmus, but they have little to recommend them for canalization. They are known as the *Atrato-Napipi* route with *778 feet* elevation, and the *Atrato-Tuyra* with *800 feet* elevation, both being partly on the line of the great river Atrato. Lake Nicaragua is 110 miles long and 40 miles wide. Standing on its western shore, its waves beat at the traveler's feet with the cadence of an ocean surf, and the opposite shore is out of sight. It is from 12 to 240 feet deep, and free from hidden dangers, except that its waters are infested with sharks, having probably come from the Caribbean up the River San Juan, and gradually become habituated to the new environment as in the case of the sharks in the lakes of the Fejee Islands.

Map of Nicaragua Canal

Lake Managua is 30 miles long and 15 wide, of an irregular shape and 24 feet higher than Lake Nicaragua, with which it is connected in high water by the Tipitapa river. It is proposed to unite these two lakes by a canal with one lock to overcome the difference in elevation. This work is included in the Canal Company's contract with the Government of Nicaragua.

These two great lakes and the consequent low summit level between the oceans give to Nicaragua an especially fine climate—it may be called a marine tropical climate. The tradewinds from the Atlantic blow, with rare exceptions, across the Republic, minimizing malarial influences and lowering the thermometer, so that at night one needs a blanket to sleep comfortably in the vicinity of the lakes.

Among the many advantages possessed by this favored land, there is one which far exceeds in value her resources of mine, field and forest. Standing midway between the northern and southern extremities of the continents, the barrier there presented to direct communication between the two great oceans and the countries bordering upon them is, as before stated, the lowest that exists anywhere on the American continent. The import of this great fact to the commercial world remains to be considered. We merely remark here that Nicaragua is *on the highway of the worlds future commerce*, and, in a military point of view, far exceeds Gibraltar in importance. It is, in fact, *the key between the Atlantic and the Pacific—the path of empire is through its gateway for the nation that holds the key!*

Since the days of Walker, the Filibuster, in 1856, Nicaragua has enjoyed peace and a good government. It is almost out of debt, and generally has a small annual surplus, which is devoted to building railways operated by the Government for the benefit of the people, instead of charging all the traffic will bear. The Republic is divided into nine Departments, each governed by a Prefect. Otherwise the form of government is much like that of the United States. The present President, Doctor Roberto Sacasa, is a wise and patriotic Executive, commanding the respect of all who know him.

There are several small cities in the Republic. *Leon*, with 35,000 inhabitants; *Granada*, with 15,000; *Chinandoga*, with 12,000; *Managua*, the Capital city, with 10,000; *Maraya*, with 18,000; *Rivas*, four miles from the canal, Western Division, with 8,000; *Matagulpa*, with 9,000, and *La Libertad* with 5,000. Besides this there are several smaller towns, San *Juan del Sur*, San *Juan del Norte*, *Blewfields Carnito*, and others. There are few good roads in the country, and transportation is slow and expensive, except, as in California, by water. Two Government railways from Corinte South are in operation, and several charters have been granted for others; one is being constructed by an English company, from San Ubaldo, on the Great Lake to the Rama river, with deep water communication 30 miles to the Atlantic coast. When this railway has been completed, Nicaragua will have an inter-oceanic highway, independent of the Canal. The majority of the population is settled on the Western coast of the Republic. The industry of banana and cocoanut growing has been so increased on the Atlantic coast that a regular line of weekly steamers runs between New Orleans and the so-called Mosquito coast of Nicaragua. This coast is generally low, heavily timbered, and has a large rainfall. Between the Atlantic coast and Lake Nicaragua there are rich mineral districts with mines of gold and silver already being worked, two of which are listed on the London stock exchange. This section of the Republic is also largely devoted to cattle-raising.

The availability of the Nicaragua route as an inter-oceanic highway was indicated as early as 1550 by the

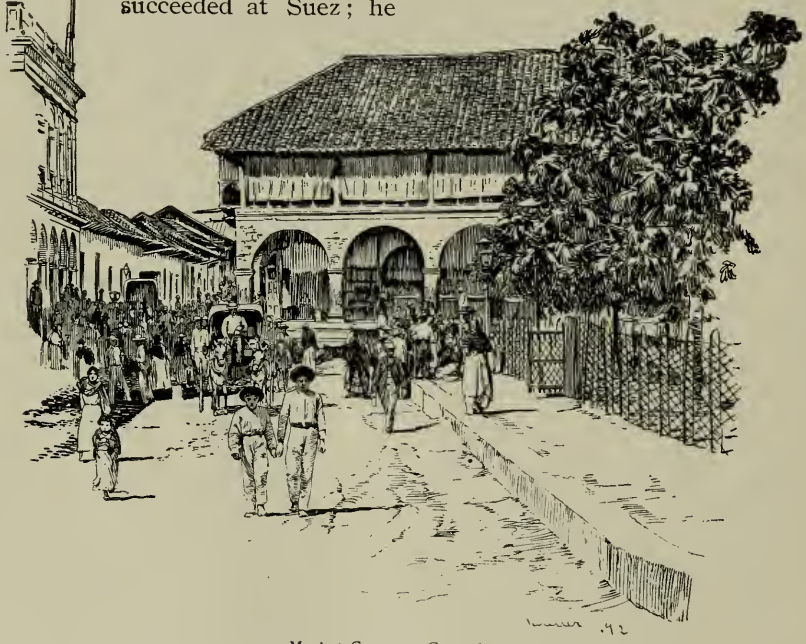
Lake Nicaragau. Ometepe Island in the distance

Spanish explorer Antonio Galvao. Since 1825 the subject has been repeatedly presented to the Governments of Nicaragua and the United States. In 1844 Don Francisco Castellon, a citizen of Nicaragua visited France, and the project was called to the attention of Prince Louis Napoleon, who published a pamphlet on the subject, but no active efforts followed. In 1849 Cornelius Vanderbilt and associates obtained a concession for a ship canal, and a survey was made for them by Colonel Childs, of Philadelphia, which was pronounced feasible by United States Government Engineers. Mr. Vanderbilt failed, however, to enlist capital enough to undertake the work, and permitted the concession to lapse. I have heard it stated that English capitalists objected for the reason that Child's survey provided for a canal with only 20 feet water, which would be mostly to the advantage of American coasting trade, and not deep enough for English ships in the foreign trade. The present surveys provide for the largest ships that navigate the ocean, 30 feet depth, with locks 650 feet long and 80 feet wide, with facilities for the construction of still larger locks if they are needed.

In 1852, a series of explorations were commenced covering the whole isthmus, partly on private account, but mostly under instructions of the United States Government. In 1872–73, complete surveys of the Panama and Nicaragua routes were made under command of Commander Lull, United States Navy, with Mr. A. G. Menocal as the Chief Engineer. The result of these surveys was the condemnation of the Panama route and the approval of the Nicaragua route for a lock canal, using the great lake as its summit level. The survey demonstrated the possibility of a lock canal at Panama with 14 feet more elevation than at Nicaragua, and at somewhat greater cost. It entirely condemned the Panama route for a sea-level canal, as afterward attempted by the French. General Grant, himself a civil engineer of no mean pretensions, wrote in the *North American Review* of February, 1881, that, if practicable at all, the Panama canal would cost over $400,000,000. Over three-quarters of that amount has been sunk in the attempt and less than one-quarter of the necessary excavation accomplished. General Grant is also on record as asserting that every dollar put into the Panama canal would be lost to the investors.

In May, 1879, Lesseps called together the International Canal Congress at Paris for the assumed purpose of consultation as to the route to be adopted. Our Government appointed Rear Admiral Daniel Ammen, United States Navy, and Mr. A. G. Menocal, C. E., as our delegates. It appearing that the Congress was controlled in the interest of parties who had acquired a concession for the Panama route, and that a fair discussion and vote was not wanted, our delegates declined to vote. It subsequently appeared that a syndicate of Frenchmen, including Count de Lesseps, had made prior application to the Nicaragua government for a canal concession, and failing there by one vote only, had taken up the Wyre concession from the Colombian Government for a canal at Panama. Had Lesseps succeeded in obtaining the Nicaragua concession, we have every reason to believe the Nicaragua canal would have been opened in 1888, although he might have developed there the same extravagance and poor judgment which characterized the work at Panama, but one-third of what he expended would have opened the Nicaragua canal to commerce. There are those, and many of his countrymen among them, that charge De Lesseps with dishonesty, but I think they do so unjustly. He had built a sea-level canal at Suez, encountering only political obstacles, and he thought he could do the same at Panama, under entirely different conditions of rainfall, drainage and

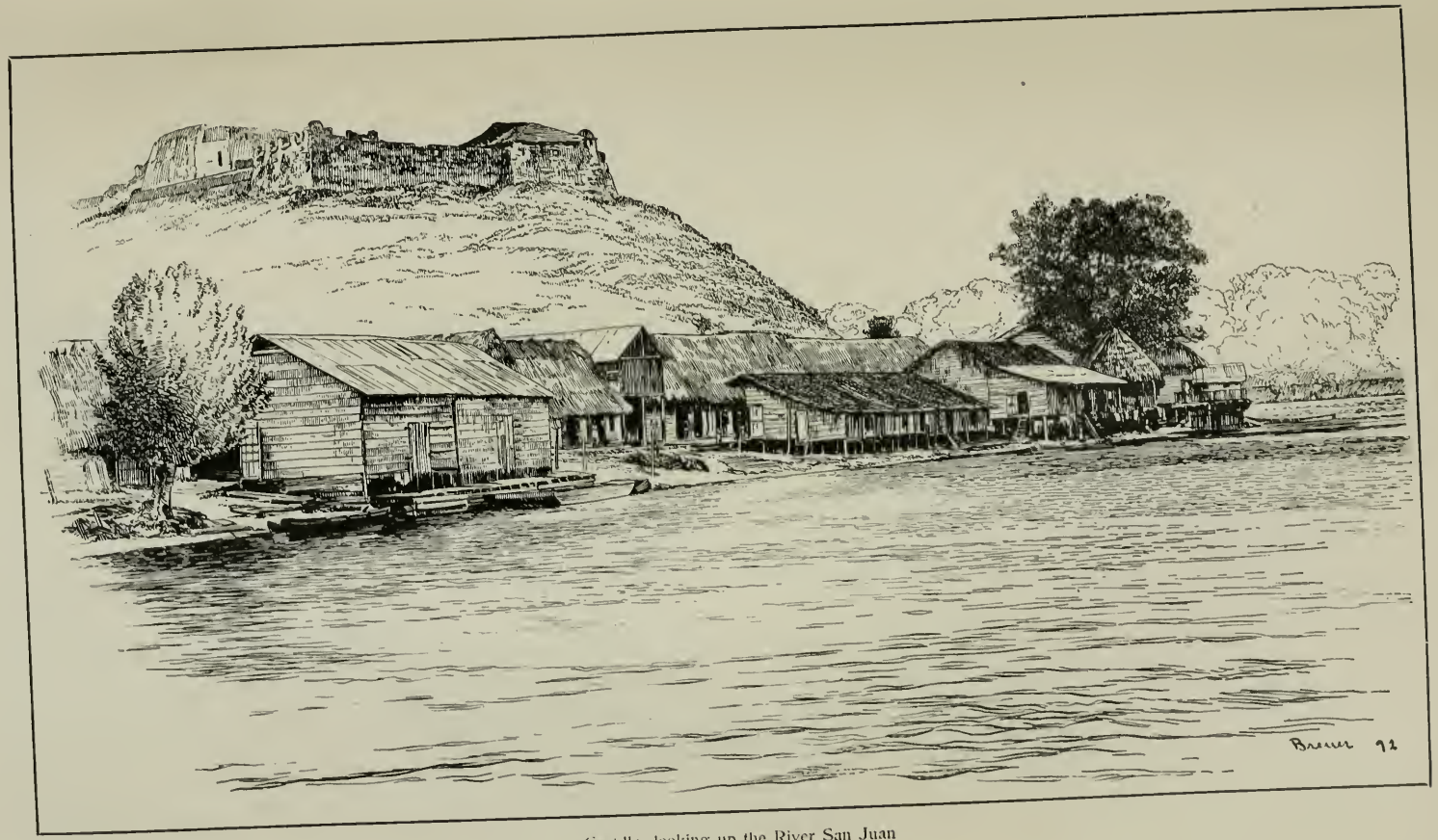
topography. He was vain and ambitious. His engineers ignored the maxim of Davy Crockett, "*Be sure you're right, then go ahead!*" They went ahead *first*, and found out they were wrong *afterwards*. They destroyed the route for a lock canal before they gave up the sea-level canal theory. The facility with which Lesseps raised money was a marvel to the financial world. He had the full confidence of the middle classes of France, who confided their earnings to him without a question. "He had succeeded at Suez; he would succeed at Panama." Alas for the fallacy of human judgment when it is not based on the solid foundation of truth and soberness!



Market Scene at Granada

In 1880 a Provisional Inter-Oceanic Canal Society was formed at New York, including Gen. Grant, Gen. McClellan, Admiral Ammen, and others. In May, 1880, the Society obtained a Canal Concession from the Government of Nicaragua, and in December, 1881, a bill was introduced in Congress by Senator Miller, of California, for an inter-oceanic canal at Nicaragua, under control of the United States Government. This bill was bitterly contested by the agents of the Panama Canal Company, and by Captain Eads with his ship-railway project. It passed the Senate, and having been taken up out of order in the house, a procedure rendered necessary owing to the approaching adjournment of Congress, it failed of the necessary two-thirds vote, although it had a decided majority in the House of Representatives.

Meanwhile the administration of President Arthur was secretly negotiating a canal treaty with Nicaragua for construction on Government account, with a joint sovereignty and the right to fortify the termini. This treaty was ratified by the Senate of Nicaragua, but was withdrawn from the United States Senate by President Cleveland, who had meanwhile attained office. His assigned reason was



Castillo, looking up the River San Juan

a fear of foreign complications. The friends of the enterprise were not disheartened—the demand for an inter-oceanic canal was increasing, and the facility of construction at Nicaragua had been demonstrated by repeated surveys with instruments of precision.

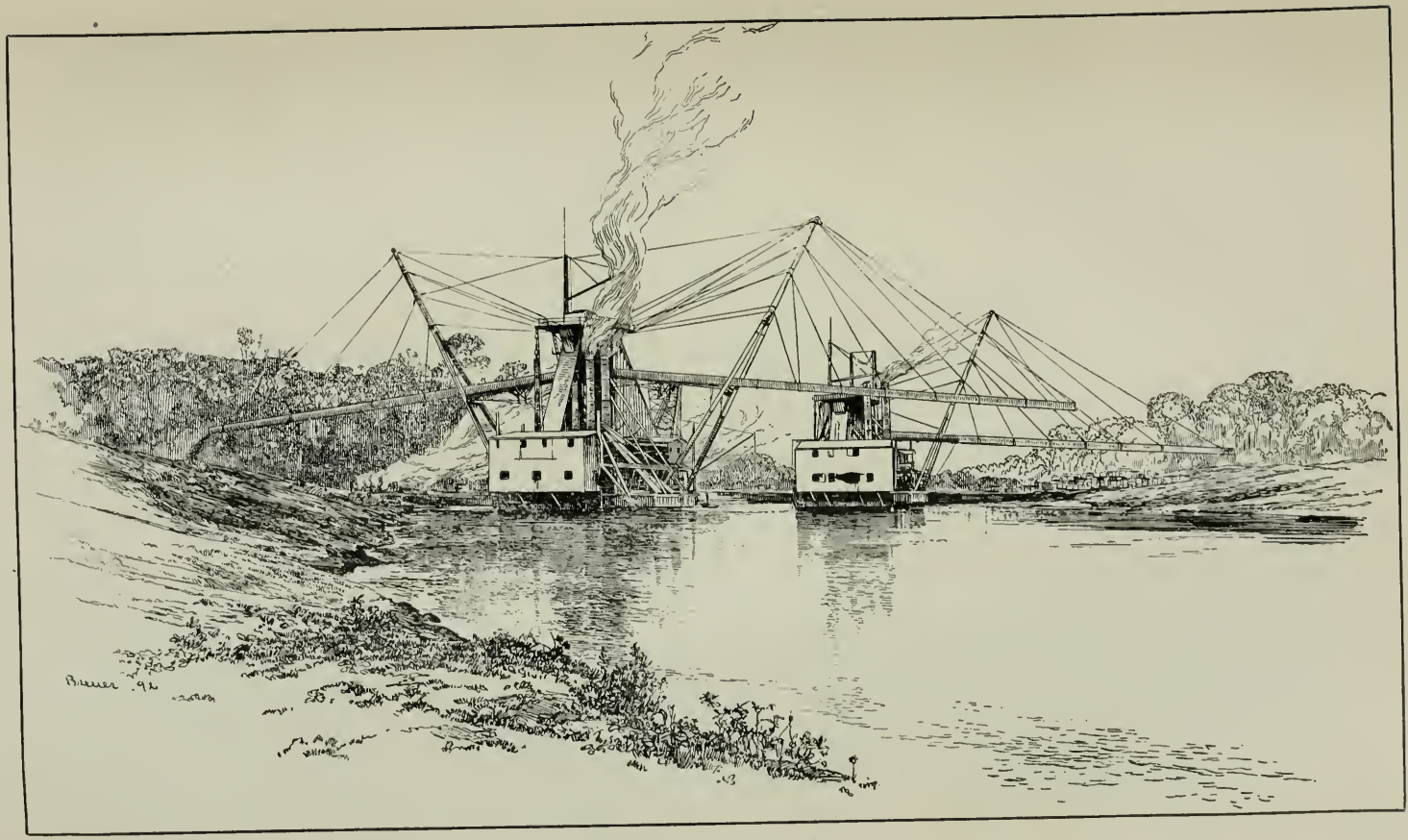
In 1886 *The Nicaragua Canal Association* was formed, and another concession was obtained from Nicaragua and Costa Rica, the former one having lapsed, a payment of $100,000 was made to the Government of Nicaragua as an evidence of good faith, and in 1887 surveying was again resumed under auspices of the new association, with the view of developing every possible improvement, prior to construction. The labors of this last survey may be illustrated by the fact that although the canal in excavation is only 26⅞ miles, not less than 4,000 miles of survey were made including, cross sections, embankments, locks, railroads, etc.

Borings were made all along the line to the bottom of the proposed canal, and samples are placed at the office of the company at New York, for the inspection of engineers and contractors. The Maritime Canal Company of Nicaragua had been organized meanwhile, and had acquired the rights of the Canal Association, the concession being for two periods of ninety-nine years each. The efforts of this last company to enlist private capital requiring the aid of influential capitalists and business men, the Nicaragua Canal Construction Company, of which the Hon. Warner Miller is President, was organized, and a contract made with it to construct the canal, payable in stock and bonds. Allusion having been made to this company as an imitator of the *Credit Mobilier* and *Contract and Finance Company*, it is proper to say that the contract is a matter of record, on a fair basis, and that not a director in the Construction Company is on the Directory of the Canal Company. The stock of both companies is open to the public at this time, as a legitimate investment. The Construction Company has devoted itself to interesting private capital only, and has thus far expended about $5,000,000 with economy and decided success.

In January, 1888, the bill to incorporate the Maritime Canal Company of Nicaragua was introduced in the forty-ninth Congress, and passed that body. This bill concedes no privileges except the moral support of incorporation by the Government of the United States. On the 10th of January, 1891, a bill was introduced in the United States Senate by Senator Sherman, empowering the Government to guarantee $100,000,000 four per cent bonds to be issued as construction proceeds, under investigation of five engineers appointed by the President, the company to place *in escrow* with the Secretary of the Treasury seven-tenths of its capital stock as security, of which the Government has the option of purchase (all or any part thereof) at any time prior to the maturity of the bonds. The Government also places six directors in the board to vote the majority of the stock held as security.

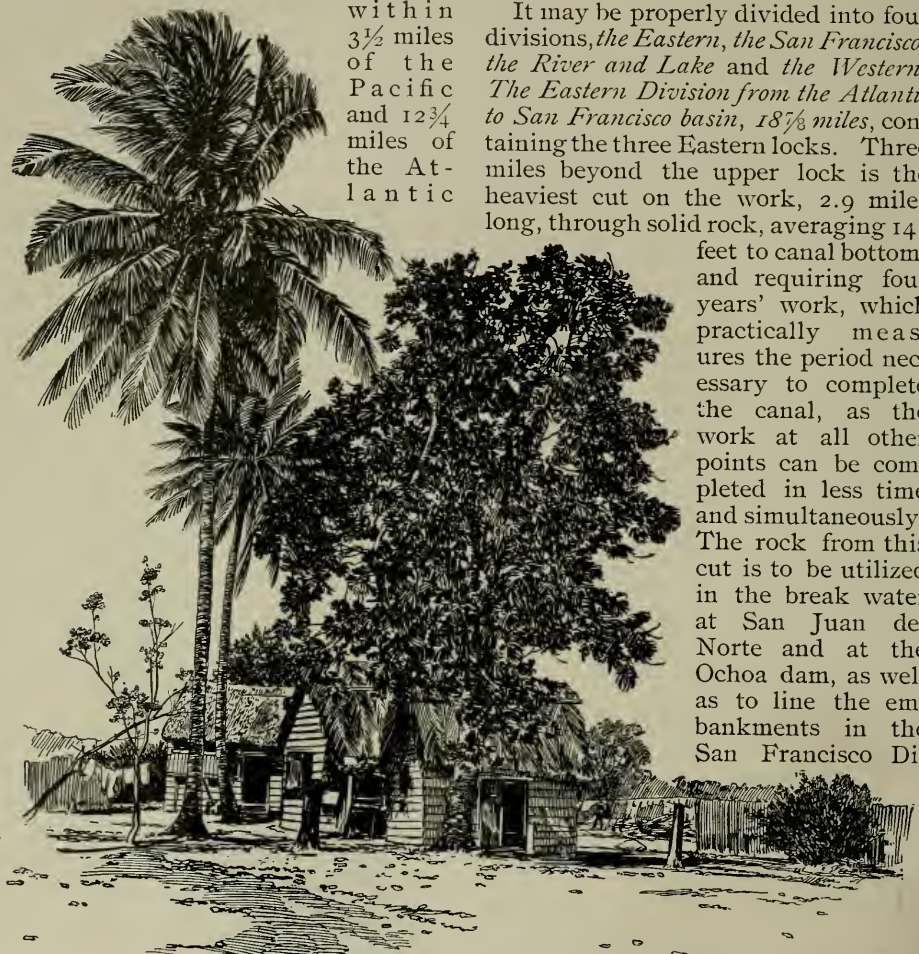
The introduction of this bill was not at the instance of the promoters of the enterprise, but originated in the Senate Committee, as stated in its report. In fact, the Canal Company are at the mercy of Congress, for the charter provides that *Congress shall, at all times, have the power to alter, amend, or repeal this Act when, in its judgment, the public good may require.* The bill was withdrawn late in the session, and has again been introduced into the present Congress, with the urgent recommendation of President Harrison that it shall be passed. His reasons are well known to the public through his message to Congress in December last. Turning from this somewhat tedious history of delays procured largely by interests adverse to the public welfare, a brief description of the projected canal is in order.

The Nicaragua canal may be briefly described as a summit level of naviga



Dredgers at Work on the Canal

tion in fresh water, 153¼ miles long, 110 feet above the sea, reaching within 3½ miles of the Pacific and 12¾ miles of the Atlantic ocean. The total length of navigation is 169½ miles; there will be three lift locks at each end of the summit level.



Ranch House in Nicaragua
Cocoa Palm and Bread Fruit Trees

It may be properly divided into four divisions, *the Eastern*, *the San Francisco*, *the River and Lake* and *the Western*. *The Eastern Division from the Atlantic to San Francisco basin, 18⅞ miles*, containing the three Eastern locks. Three miles beyond the upper lock is the heaviest cut on the work, 2.9 miles long, through solid rock, averaging 141 feet to canal bottom, and requiring four years' work, which practically measures the period necessary to complete the canal, as the work at all other points can be completed in less time and simultaneously. The rock from this cut is to be utilized in the break water at San Juan del Norte and at the Ochoa dam, as well as to line the embankments in the San Francisco Division, which extends from the divide to Ochoa, 12½ miles. This division utilizes the depressions of four small streams, which are used for canal purposes by the construction of retaining embankments, thus saving excavation and making a navigable channel much wider and deeper than the excavated canal. At the western end of this division we come to the Ochoa dam across the River San

The Wharf on Lake Nicaragua

Juan, 1900 feet long and 70 feet maximum height, raising the waters of the river 56 feet to the level of the lake, less four feet, which allows about three-fourths inch per mile for a slow current from the lake over the dam, probably three-quarters of a mile an hour.

Lake and River Division, 121.04 miles. The River San Juan discharges as high as 20,000 cubic feet water per second. It is a large river of clear, fresh water, from 200 to 400 yards wide—a larger stream than the Sacramento in ordinary stages. By the Ochoa dam, slack-water navigation is obtained to the lake with 4½ feet excavation for the 24 miles nearest the lake. The width of this inundated river navigation will vary with the conformation of the land, from the present width to half a mile or more. Some of the bends must be cut off to give a radius easy for navigation of the largest ships. There will be ample space on all this division for ships to pass each other safely at a speed of eight miles per hour, while in the lake full speed can be maintained. Dredging in soft mud will be necessary at the eastern end of the lake for 14 miles, averaging about ten feet. The lake navigation is 56½ miles. Dredging will be necessary for 1400 feet at its western shore.

Western Division—Lake to Pacific Ocean, 17.04 miles. Of this distance, 11½ miles will be in excavation, and 5½ miles in the Tola basin, a depression of 4,000 acres, which is flooded 30 to 70 feet by a retaining dam 70 feet high and 1800 feet long. The use of depressions on the canal line is only possible on a surface canal, and has been made use of to great advantage by the engineers on the Nicaragua surveys.

The Port of Brito on the Pacific has to be created, but this can be done without risk and at moderate cost. It somewhat resembles Port Harford, except that the landing is on low ground. A breakwater 900 feet long must be extended from the headland, and a shorter one from and perpendicular to the beach, enclosing a small harbor of about 100 acres, which with the enlarged portion of the canal contiguous thereto, will make all the harbor needed, especially as the splendid harbor in the Tola basin will be only 3½ miles distant, and will be largely preferred, being fresh water.

The port of San Juan del Norte, at the Atlantic terminus, was a fine harbor 35 years ago, but has been damaged by silt deposit from the Rio San Juan, and by the drifting sands of the ocean beach. The plans for the restoration of this harbor involve a cost of about $2,000,000. A breakwater about 3,000 feet long has to be constructed to protect the entrance from the drifting sands outside, and the channel to leeward dredged to a depth of 30 feet. Eleven hundred feet of this jetty have been already constructed, and there is now 15 feet water in the channel. The success which has attended this work already is an assurance of success. The restoration of this port was the most difficult problem of the canal. There is nothing else in the work difficult of execution; the problem is merely one of finances. The port of *San Juan del Norte* is often miscalled *Greytown*, but this name is distasteful to Nicaragua, having been first used by the English when the British Government seized the port, and placed there Sir George Grey as military Governor. The eastern seaboard of Nicaragua was evacuated by the British on the ratification of the Clayton-Bulwer treaty, some features of which are still a contention between our Government and that of Great Britain.

The capacity of the canal will be 20,440,000 tons, which can be doubled by duplicating the locks. The Suez canal passed in 1890 about 9,000,000, producing a revenue of 19 per cent. The capital stock is now worth 500 per cent. The Nicaragua canal will open with an assured tonnage of 8,730,000 tons, which will rapidly

Showing Dredgers from the Land. Embankment thrown up and Railroad

increase, producing a revenue of $16,250,000 per annum. The cost of maintenance may be safely placed at $1,500,000 per annum. The enterprise has every indication of being good for over 14 per cent on $100,000,000, the estimated cost. The time of passing through the canal is placed at 28 hours, including lockages.

of bankers' commissions and interest account.

The English Board exceeded this six hundred thousand dollars, a remarkable concurrence, considering different units of cost. The American Board of Supervising Engineers make a grand total of $87,799,570, and conclude their report with the remark that the enterprise is full of promise.

Native Houses on the San Juan

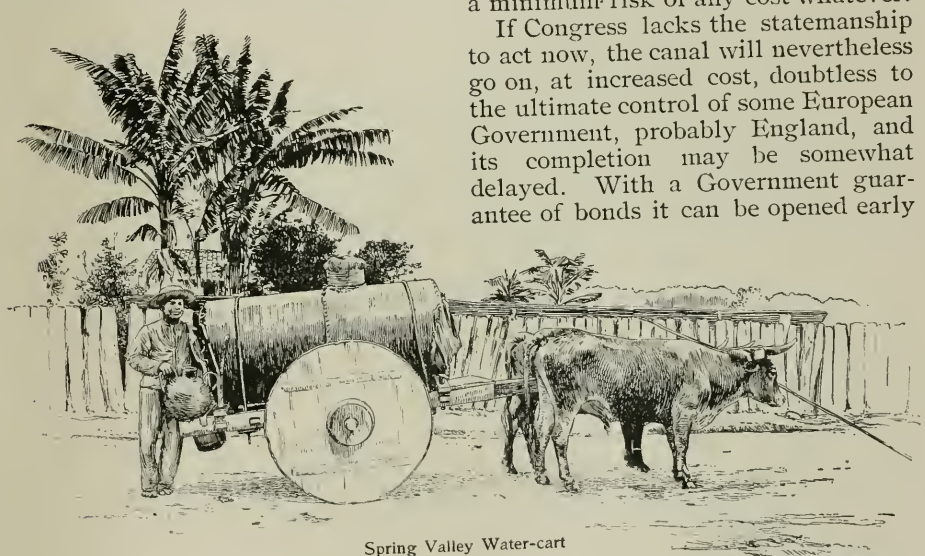
The cost of the work has been very carefully estimated by Engineer Menocal, and also by two Boards of Engineers, one in the United States and one in England. Dredging is calculated at 20 to 30 cents per cubic yard. Earth excavation at 40 to 50 cents. Rock excavation at $1.25 to $1.50. Sub-aqueous rock excavation at $5. The work thus far done has been under the estimates. Menocal makes a total cost of $65,084,176, exclusive

If the company can negotiate its securities at par, we may safely assume the total cost at less than $100,000,000. This can be done only by a Government guarantee of bonds. If securities have to be discounted, the cost will be greatly increased, probably 50 per cent. The Suez canal cost $94,000,000, and its bonds first sold at 60 per cent only.

The effect of this beneficent work upon the welfare and progress of the

Pacific coast is not a matter of doubt. We are suffering acutely the want of cheap transportation. The canal is a full and final solution of the question, and will terminate our arrested development.

Water transportation is the cheapest known to commerce—one-fifth to one-sixth cheaper than railway carriage. It is no trifling advantage to strike off 10,753 miles between New York and San Francisco—nearly one-half the earth's circumference. New York in 20 days, Liverpool in 28 days and New Orleans in 14 days easy steaming—

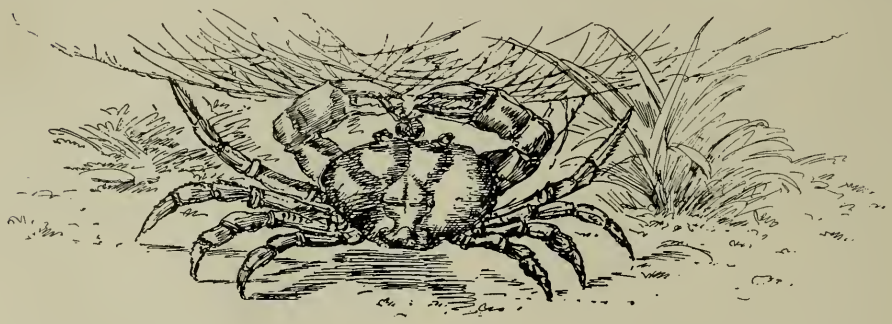


Spring Valley Water-cart

that is what the canal means for our producers and merchants! And this at a cost of one-third of a cent per pound or even one fourth of a cent, including toll, and without breaking bulk! Refrigerator steamers will land the products of our orchards and farms in Northern Europe when that market is bare of fruits and vegetables, and over-production will be an impossibility. Every acre of land will be doubled in value by the canal within a few years after its completion. Space forbids an extended discussion of its political importance to our country. Our greatest statesmen of all parties have recognized its value in this respect, and Grant has written: "*I recommend to my countrymen an American canal under American control.*" The illustrious names of Clay, Grant, Arthur, Blaine, Harrison, Sherman, Morgan, Evarts, Edmunds and many others are on record in favor of construction under the control of the United States Government. At this time, circumstances facilitate this policy; and should the occasion not be availed of, it may cost the Republic blood and treasure to obtain what we may to-day have if we desire it, with a minimum risk of any cost whatever.

If Congress lacks the statemanship to act now, the canal will nevertheless go on, at increased cost, doubtless to the ultimate control of some European Government, probably England, and its completion may be somewhat delayed. With a Government guarantee of bonds it can be opened early in 1897. If dependent on private resources, probably two years longer may elapse before the Gateway to the Atlantic is open to us! One word more for Nicaragua! Within five years from the opening of the canal the commerce of that Republic will pay its cost of maintenance. The enterprise is a fit conclusion to the great progress of the expiring century, already so full of history and advancement of the human race. It is the last great inter-oceanic highway to be opened, and the names connected

therewith will go down the ages with honor. Our country and the world demand it, and the world goes forward at this age—progress is the watchword of civilization! For this I have labored in my humble capacity for thirteen years! When the first American steamship passes through the Nicaragua canal, I hope she may hail from San Francisco, and when I see the flag of our country at the peak of an ocean steamship on Lake Nicaragua, I shall reverently paraphrase the devout Simeon of nineteen centuries ago: *Lord, now lettest Thou thy servant depart in peace, for mine eyes have seen the salvation of the Pacific coast and the glory of the Great Republic!* Welcome the day! It cannot come too soon!



SUNSET

BY ROSE HARTWICK THORPE

From his high throne the mighty Ruler of the days,
Bends down and downward to the fond embrace
Of Ocean's arms. Upon her bosom lays
The glory of his glad, enraptured face,
And flushes all her being with his gaze.

THE HAIRY MEN OF JAPAN

BY HELEN E. GREGORY-FLESHER, A. M.

THE Ainos or hairy men of Japan were first brought prominently to the attention of the scientific world by Prof. Albert S. Bickmore of the American Museum of Natural History, Central Park, New York, who was the first scientist to thoroughly investigate their ways and customs and to visit their towns and villages.

So close a veil of mystery enshrouds this strange race, whose fate it is to live despised in the land where once they reigned supreme, that the only native account of their origin is a half forgotten myth.

The Ainos have been considered by some ethnologists to be the aborigines of Japan. They have no history, few traditions, no written characters, can count with difficulty to a thousand, are densely ignorant and utterly uncivilized, yet are upright, honest, gentle and singularly truthful. At one time they overran the Kuriles, Yezo and Hondo, the main islands of the Japanese archipelago; now they are confined to Yezo alone, the most northerly of the group which forms the Mikado's empire.

This island, sometimes incorrectly called Yesso, lies half the year under ice and snow. A glance at the map of Asia will reveal the fact that it lies opposite to and not very distant from the coast of Siberia. It is separated from Hondo by the Strait of Tsugara, which is remarkable for its great depth. Traces of their former occupancy of Hondo are to be found in many geographical names. Noto, for instance, is a corruption of an Aino word meaning promontory. The Tonegawa river, which runs through Tokyo, derives its name from 'tanne,' the Aino for long. Now the Ainos live in their frost bound island forgotten and unknown; ekeing out a miserable existence fishing and hunting, and like our American Indians, gradually melting away before the light of civilization like snow before the sun.

Who are these people? And from whence did they come? Scientists say that Japan was inhabited by some unknown people before the time of the Ainos. But they were the only race found there at the dawn of history and the records go back no farther.

Tradition would seem to point to an Asian origin: their own legend or myth is briefly as follows:

Kamui, a prince of Asia, fell violently in love with his own daughter. As a punishment for their wickedness the whole body of the young princess became thickly covered with hair. In terror she fled to the sea-shore where she found a large boat occupied only by a great black dog. She embarked in it with the dog for sole companion and for many months sailed the sea. At last she landed in a mountainous

An Old Aino

country (Japan) and gave birth to a son and a daughter. The descendants of these children married, some among themselves and others among the bears of the mountains. The children of the bears were brave and skillful hunters and withdrew further and further into the inaccessible mountains where they yet live and direct the affairs of men.

Concerning their real origin there are many and various suppositions. Some authorities derive 'Aino' from 'Inu,' a dog, while others think it a combination of the words Ai-no-ko, 'offspring of the middle,' that is a dog and a woman. Both in reference, of course, to their reputed origin of which they themselves are very proud, while the Japanese despise them both for that and their extraordinary hairiness. To many travelers they are known as the 'hairy Kuriles.'

One writer speaks of them as the 'hairiest race in the whole world.' But they hardly seem to deserve that epithet as many Europeans are quite as thickly covered with hair.

The Japanese, being an unusually smooth-skinned people, and wearing neither beard nor moustache, have exaggerated the stories concerning the Ainos. Those who declare the Ainos to be the aborigines of Japan, the forefathers of the present Japanese race in whose veins flow a strain of Aino blood, have adduced some very striking arguments in support of this theory. Every one who has visited Japan has noticed the two types seen everywhere. The slender frame and small features, slanting eyes and eyebrows of the aristocratic families and the coarse build and large fat face found among the humbler classes.

The 'pudding faced' type, these scholars assert, are mixed Aino and Japanese blood. The aristocratic type, rendered familiar to us by Japanese artists who love to depict and exaggerate their characteristics (the slanting eyes and delicate features), is said to be the pure unmixed Japanese. Other arguments are drawn from relics of the Stone Age. These relics and household utensils, are exactly the same as the utensils and weapons found in use among the Ainos to-day.

Ancient Japanese is said to resemble the Aino language as spoken at present as much as it does modern Japanese.

Whatever may be thought of this theory, it is noticeable that at one time the Japanese wore hair on the face. All pictures of the ancient nobles represent them with full beard and moustaches; the gods also are pictured not only with these but with abundant flowing locks.

The theory which appears to present the fewest contradictions is that the Ainos, crossing from northern Asia, Siberia probably, gradually pushed southward until they occupied all Hondo.

A legend of about the same antiquity as the Aino dog myth, would seem to indicate that the Japanese, who belonged to a more southern race, landed, or as their own quaint phrase expresses it, "The Divine Ancestors descended from Heaven" upon Kiushiu about the same time as the Ainos arrived in the north. The Japanese established their capital at Kyoto and, conquering the Ainos, drove them further and further northward until the latter crossed the strait of Tsugara, and to-day Yezo is all that is left to the people who at one time possessed the greater part of the whole kingdom.

In regard to the two distinct types among the Japanese, the assertion that the 'pudding face' shows an admixture of Aino blood has been stoutly denied and it is confidently affirmed that the half breeds seldom live and never in any case have descendants after the fourth or fifth generation and that this difference among the Japanese is accounted for by the fact that though both came originally from Korea, there were two tides of immigration, first the coarser, rougher settlers, then the more aristocratic. It has been discovered that the Aino and

Altai dialects much resemble each other which would seem to prove that the former originally came from that region.

An Aino Shuttle

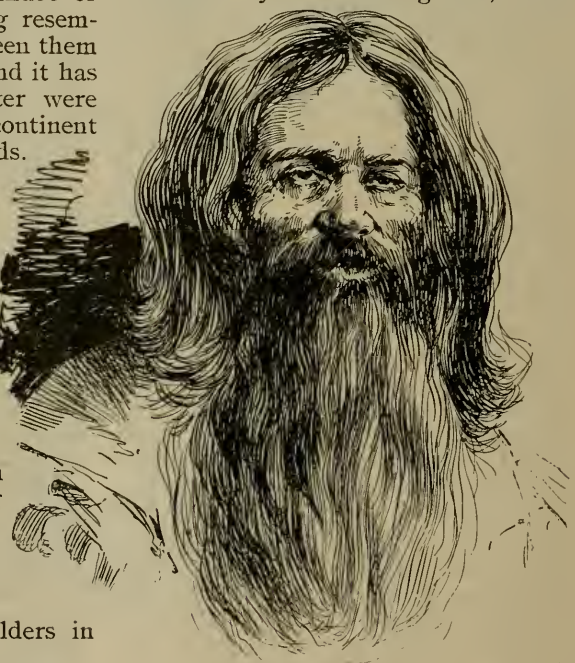
This seems to be the most thoroughly satisfactory account of both races. Other ideas that have been advanced are that the Ainos and Esquimaux are identical and that the Japanese were originally Hindoo or perhaps Javanese. A strong resemblance has been traced between them and the American Indians and it has been surmised that the latter were Ainos who crossed to this continent by way of the Aleutian Islands.

One gentleman, after much laborious and pains-taking research, has discovered that the Ainos are 'the ten lost tribes of Israel!'

They are a larger and sturdier race than the Japanese, and have that curious flattening of the leg and arm bone noticed among the cave men. The men wear beards and moustaches from twelve to fourteen inches long and shave the scalp an inch or two back from the front, which lends apparent height to the forehead: the rest of the hair falls over the shoulders in a soft, intense black mass.

The tinge of red or brown so often observed in the hair of the Japanese when it is entirely free from oil or pomade, is never seen among the Ainos. Strange to say, the Japanese have a strong aversion to fair, brown or auburn hair, all of which they term indifferently 'red.' Devils and evil spirits are invariably depicted with 'red' locks. This prejudice is so deeply rooted that it is an absolute drawback to a missionary to have auburn hair.

The Aino complexion is generally brown though many of the women are not so dark as numbers of European brunettes. The nose is short, flat and the nostrils outstarting. But the glory of the Aino face lies in the magnificent liquid brown eyes, and their benevolent and pathetic expression. Though their dress gives them a wild and savage appearance, their beautiful eyes and the gentle, sweet



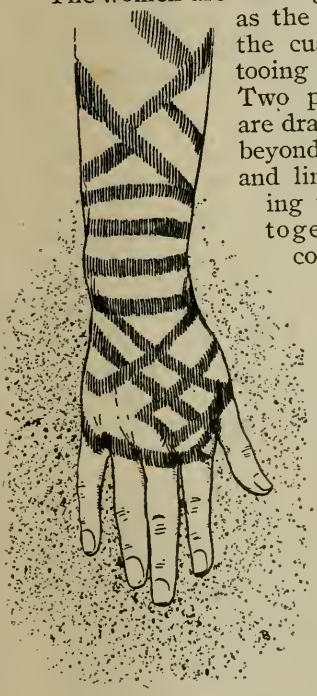
An Aino Type

smile that illuminates the whole countenance, dispels any doubts that might linger in the breast of a timid traveler.

Most of the older men have a thick growth of bristly hair, about an inch

long, covering the limbs and body. Among the young men this is unusual, though one writer describes two boys who had fine black hair, unmistakably fur, on their backs between the shoulders; but such cases are rare exceptions. The mouth is wide but well shaped, and the lips full. The eyes are straight, not slanting, the brows broad, the skull round and the ears small and low set. The soft, black hair is sometimes wavy but never curly.

The women are not so good looking as the men, due to the custom of tattooing their faces. Two parallel lines are drawn over and beyond the mouth and line made joining the eyebrows together. The coloring matter is dull blue and gives them the appearance of having an exceedingly dirty face, which is also often the case. Two long locks of hair are brought from the back of the head and passed round forward so as to prevent the front falling into the eyes. The rest is then cut short, about two or three inches below the nape of the neck. This is of itself very unbecoming, and when the tattooing is taken into consideration also, it will be readily understood that it would be difficult for almost any woman to look beautiful or even good-looking under these circumstances. The hands and arms are also decorated with geometrical patterns. When a little girl is five or six years old, a band is tattooed near the elbow. Every year another band or pattern is added until the girl is of age or marries. The women are beautifully formed; their figures being slender, lithe and supple, their carriage good and limbs well developed. Their teeth are strong, white and even, and are one of their most attractive features.



Arm of an Aino Woman

In the season the men hunt and fish; the rest of their time is occupied in sleeping and eating. To work and rear children is a woman's part, they say. They do not treat their wives unkindly, though, and whatever they earn the men never take from them; it is their own. A low, soft, musical voice, a gift possessed by both men and women, is one of their greatest charms. Except when violently excited, their tones are carefully modulated and pleasant. At Ishkara the best salmon are caught. Immense seines are used, requiring at least two or three men to work them. These salmon are sent all over the Japanese Empire, and fetch the highest price. Aino weapons are of the rudest description. They consist of a three-pronged spear for spearing salmon through the ice; a single-bladed lance for bear hunting and bows and arrows. The bow is simply a peeled bough, neither trimmed or lightened at the ends. The arrows are very ingeniously constructed in three pieces. The head is formed of a sharp piece of bone with a narrow groove for poison. This piece is fastened to another bone by a strip of bark. The whole is then fixed to a peeled shaft a little over a foot long. The bone part is so arranged that when the arrow strikes, the shaft falls off, leaving the bone sticking in the wound. The poison used is aconite, obtained from the wild plant. A wound from these arrows kills a bear in ten minutes. The flesh immediately surrounding the wound is cut away, but all the rest is quite safely eaten. If a man is wounded by one of these arrows,

his only hope is instant excision of the surrounding flesh. These, and bear traps set with poisoned arrows, have been forbidden by the Japanese government.

The dress of the men, women and children differs but little. In winter they wear two or three skin coats, with hoods of the same. Tight leggins of skin or a sort of bark cloth are worn by both men and women; ordinarily the feet are bare, but when they go hunting moccassins are worn. In the summer the skin coats are replaced by *Kimonos*, or long coats of bark cloth. These are in beautiful shades of fawn. The *Kimono* falls below the knee and is confined at the waist by a narrow girdle in which is thrust a rough dagger-shaped knife with a carved wooden handle.

Sometimes a waist-coat is worn under the coat.

The women's *Kimonos* are longer than those of the men, but they wear no girdle. They close all the way up to the neck. Aino women are very modest and never allow the dress to fall open to the waist, as many Japanese women of the lower classes frequently do.

An Aino will not change her clothes except by herself or in the dark. "It is not pleasing to the gods to see us naked" they say. These remarks must not be construed into an invidious comparison between Aino and Japanese women. Such comparison would be most unfair. Custom regulates almost everything. Their ornaments are large hoop earrings, with or without pendants. These, and silver or pewter beads strung on pieces of colored cotton, and occasionally a pair of brass bracelets or armlets suffice to render "beauty adorned" among a people that might be called "savages" save for their gentle hearts and manners. The Japanese government forbids tattooing, a decree which has caused them considerable distress of mind, as in some unfathomable way it is connected with their few religious ideas. Without it, they insist, no woman can marry. They retain the custom while they have lost its significance—if it ever had any.

Until seven or eight years old the children wear even less than that celebrated savage whose full-dress costume was a "Panama hat and a broad smile." Aino children limit themselves to the amiable expression—in other words, they wear nothing. After that age they are dressed exactly like their elders. Boys wear either a tonsure or tufts over the ears. Little girls allow the hair to grow all over the head and hang down over their shoulders. Girl babies are never despised but little boys are preferred.

Though Yezo has a population of only 123,000, it has an area larger than that of Ireland. It is very mountainous, but interspersed with long, level, grassy plains. Many of the mountains are volcanoes, extinct or active. Magnificent primeval forests might tempt one to stray from the beaten path, but in their depths are frightful morasses and impassible swamps. Hakodate, the treaty port, is situated in the southern portion of the island, and is truly as desolate a place as ever the human eye rested upon.

The summers here are cooler than at Ishkara, where the salmon fisheries are. The first village where Ainos are found is Horobets. It is a mixed settlement of about 20 Japanese and 40 Aino houses.

A curious distinction, a sort of caste line, is drawn between the two races. The Ainos observe a respectful distance and never intrude upon the Japanese. No Aino would dream of building his house next to the dwelling of one of the superior race.

Not a great many years ago the Ainos living upon the island of Yezo were reckoned at 20,000, now there are scarcely 15,000. Their houses are really huts. A wooden frame is first built and on this bundles of reeds are tied. Inside is a second wall of reeds tied singly. The roof is thatched with straw in three layers, so that it

An Aino Type

presents the appearance of three roofs, the second shorter than the lowest and the third the shortest of all. Like the Chinese and Japanese, the Ainos place no value upon time, and the reeds and thatch are arranged in a neat and uniform manner. The roofs are extraordinarily steep, very much like those of the Quebec houses, and probably for the same reason—to shed the heavy snow and prevent it from crushing in the roof. To each house there is a little ante-chamber, and, in order to enter, it is necessary to pass through this little room, which is used to store all sorts of things, extra reeds, nets, etc.

It is never lighted and is separated from the house proper by a square curtain of rushes bound with hide. Entering the house, we find ourselves in a large room about 25 feet long by 30 feet wide. In the center is a square fireplace, over which is suspended an iron pot for cooking. Round it sit a group of wild-looking men dressed in skins, and two or three naked children. The old men have a most venerable appearance, with their long white beards and flowing hair.

The walls are only about four or five feet high, the roof about 14. The floor is packed earth or rough boards covered with coarse rush mats. Above the fireplace a square hole is left in the roof for the escape of smoke. A mat is hung before it however, which prevents this most desirable consummation, and a good deal remains in the room.

Aino Gods of Shavings

The head of the fireplace is the seat of honor and here a raised ledge about 12 or 13 inches high and 5 feet long is erected. On this, more costly mats are placed. The Ainos sit crosslegged, like tailors, never on their heels as do the Japanese.

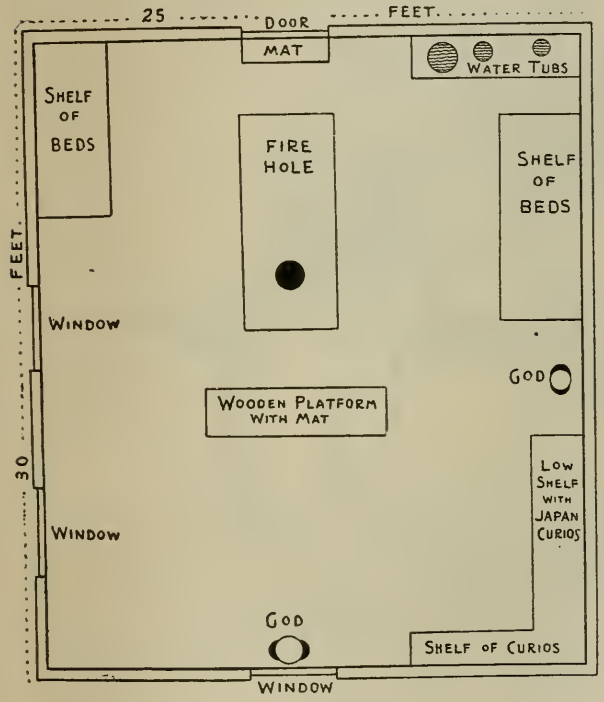
The windows are square holes closed at night by shutters made of two boards fastened together by a piece of rope.

Around two sides of the room are benches for sleeping. These, it has been surmised, are the origin of the

Japanese *tokonoma*, or recessed bed place. At night, mats are hung in front of each sleeper.

In every Aino house is a long shelf containing beautiful and valuable curios, ancient lacquer boxes, inlaid swords, pieces of satsuma, ivory carvings, etc.

These they never sell, and part with only under certain conditions. The only manner of lighting the houses at night is either by a piece of birch bark held in a cleft stick thrust in the wall, or a reed floating in a saucer of fish oil. The first method requires constant renewing, and the second gives out "a most ancient and fish like smell."



Plan of Aino House

Aino ceremonies and forms of politeness differ entirely from Japanese. They are much more European and less Oriental than those of the latter. As we left the house, the men stood up, and raising their hands and stretching them outward, waved them two or three times inward and stroked their beards. A gentle, pathetic smile of farewell lighted up their kindly faces. Embarking in an elm "dugout" we went a few miles down one of the rivers. As we came to dangerous places, the men waved their hands high above their heads, the palms outward, and broke into a sort of prayer. The roaring of the foaming current, for all these rivers are narrow and rapid, and the full, rich voices of the Ainos, as they burst into a weird, unearthly chant, made a scene never to be forgotten. Their wild dress, in such ill-accord with their mild, pathetic expression and gentle manners, and the strange, lonely scene, would leave an indelible impression upon even the most thoughtless. When one recalls that, like most dying races, they cling to those traditions which would prove them once a great nation, their melody seems to a stranger like the song of a dying swan.

One of their invocations has been translated somewhat as follows: "To the sea which nourishes us and the forest which protects us, we pray and give thanks. Ye are as two mothers fostering the same child. We pray you be not offended if for one we leave the other."

"The pride of the forest and the stream are the Ainos."

From time to time as they prayed, the boatman cast into the seething waters pieces of wood like little wands, with bunches or curls of shavings left hanging to the top. These are the emblems or symbols of their gods. Their religious beliefs are few and very vague. They are nature worshippers and deify mountains, streams and rivers, calling them all *kami*, or

spirits. The most important of their religious ideas is the worship of the bear, whom they admire for ferocious courage. The great Aino fete day is the festival of the bear. On this occasion, all wear their finest dresses of coarse blue cloth braided with rough scarlet or white braid and an apron of the same.

The costumes are really very handsome, and the scene, though wild

Aino Grain House

enough, is gay with bright coloring. In the spring, they endeavor to catch a bear cub, which is brought to the chief's house and suckled by a woman. As long as it is very young, it is treated as a pet and played with by the children. When it grows too rough for the house, a wooden cage is built outside the door, and there it remains until the end of the hunting season, when the great festival is held.

These ceremonies differ a little among the coast and the mountain Ainos. While the bear is yet in the cage, the chief takes from his girdle his rough, dagger-like knife and wounds and irritates him. The enraged animal is freed, and all fall upon him and endeavor to draw blood, for it will bring luck the whole year to the man who inflicts a wound severe enough to bleed. After he is mortally wounded and dying, weapons are offered to him with which to avenge himself, and a sort of apology is chanted, after which his head is cut off. Sometimes his foster mother shrieks and cries during the attack, and when it is all over, formally beats each one of the slayers. Reverencing this animal as they do, it seems a curious anomaly that they should hunt, kill and eat it as they do, and use its skin for various purposes.

To call an Aino a bear is to make a most flattering comparison, though there is nothing very fierce or cruel

about any of them, for they are all kind and sympathetic both to each other and to strangers.

In some of their settlements, instead of the bear's head being cut off, a rope is passed just above the shoulders, upon which the men jump until his neck is broken. As he expires, they dance around him solemnly, singing "Good-bye, bear; come back soon into an Aino."

The women never take part in this dance, or in fact in any ceremony. They never salute strangers, nor have they any form of politeness whatever. The prayer to the bear to return in an Aino would seem to indicate a belief in the doctrine of metempsychosis, but close questioning could elicit no other information than the vaguest, most shadowy idea that there might be something of this kind, but nothing more definite could be discovered.

The wands with the hanging shavings, of which I have already spoken, are to be seen stuck in the ground outside every Aino house. Inside, six or seven are fastened about in different places. When *saké*, or rice whiskey is drunk, six libations are made with a carved sake stick to this god and another to the fire; the cup is then waved toward the drinker and finally carried to the lips and emptied. A superstitious feeling prevents the sale of the sake stick of a living man, but occasionally one can be bought from the friends of a dead Aino, though the stick is usually buried with them.

The sun, fire and the moon are "kami" also, but the stars are not, for they give neither light nor heat. The most deplorable habit the Ainos have is their terrible drunkenness. An inordinate love of saké, unfortunately bound up with their religion, is the great failing of an otherwise moral, chaste and upright people. This evil it will be most difficult to eradicate, as not to drink they think displeasing to the gods.

The Ainos have made but little progress, and are much the same as when first depicted by their conquerors. Eating rice, wearing cotton clothing and the advance from pure nature worship to hero worship, as shown by the apotheosizing of Yoshitsuné, are their most noticeable steps in the forward march. The deification of this famous Japanese hero is most remarkable, and like many other things connected with this race, is wrapped in mystery.

They worship him from a sense of gratitude for benefits conferred upon their ancestors. He taught their forefathers, so they say, written characters and various arts, since lost, the books of instruction having been taken away, they assert, by a later conqueror. He gave them righteous laws and tried to civilize them, and in grateful remembrance, homage is paid him under the title of *Hanguan Dai Mio Jin*. Great Illustrious Law Giver.

The Aino language is most primitive, and is very like a Japanese dialect, though differing from the latter in possessing real pronouns. The Japanese learn to understand and speak it very readily.

Each Aino community has its own chief, who exercises a sort of paternal authority, somewhat like the patriarchs of old.

Polygamy is very unusual, but under certain circumstances may be said to be tolerated rather than permitted. If the first wife of the chief be childless, he may marry another, but each wife must have her own house; but even this is the exception, not the rule.

The office of the chief is not necessarily an hereditary one. When a man grows too old to perform the required duties he selects, to succeed him, that member of the community he thinks most fitted for the position, irrespective of the fact of his being or not being his own son. Should his son be the ablest man, his father's choice falls upon him for that reason and no other. When a quarrel occurs the chief arbitrates, punishes the offender and fixes the amount of the

fine, which is always paid in Japanese curios.

The women are nearly always virtuous and faithful to their husbands, but should one prove false her spouse can bestow her upon her lover, and the chief fixes what curios the guilty man must pay to the injured husband. If a man commits theft, he must return the stolen article with a present as an atonement. Nothing can be done without the chief's knowledge and counsel; his decision is final and affairs the young woman, though not forced, is a passive party. It is not customary for the women to marry before seventeen nor the men until twenty-one, nor even then unless the intending husband has a house to which he can bring his bride, for no dwelling is ever tenanted by more than one family—each has his separate abode.

The bride's dowry is not very costly, generally it consists of a pair of large hoop earrings and a long

Map of the Aino Country

without appeal. Even in so personal a matter as marriage he must be consulted.

If a young man wishes to wed, he chooses some girl and then asks the chief's permission. If it is granted, the suitor, either personally or through a go-between, addresses the girl's father, and if his consent is obtained the lover presents him with a Japanese curio.

This is the betrothal, and soon after it the marriage takes place. In such cloak or *kimono*. Should she be childless her husband may divorce her, but he must send her back to her parents with an abundant supply of good clothing. If, however, she should have children, he cannot divorce her at all.

Should she become a widow, with the chief's permission she may remarry, but must mourn her dead husband for a period varying from six to twelve months. During this time she remains shut up in the house, but

goes to the door at stated intervals to throw *saké* to the right and to the left. In some communities the time of mourning is only thirty days for a widow and twenty-five for a widower. But if her husband was the father of a family the house is burned to the ground and she and her children must live with some friend for three years, after which the house is rebuilt. When a dwelling is accidentally burned down all the men make a sort of "bee" and lend their assistance to build another.

The Ainos regard hospitality not only as a virtue, but an imperative duty. When travelers arrive in a village, if the chief be absent, all the old men come out to welcome the strangers, for old age is held in great reverence. When the visitors depart, the hostess presents them with cakes of boiled millet to eat on their journey.

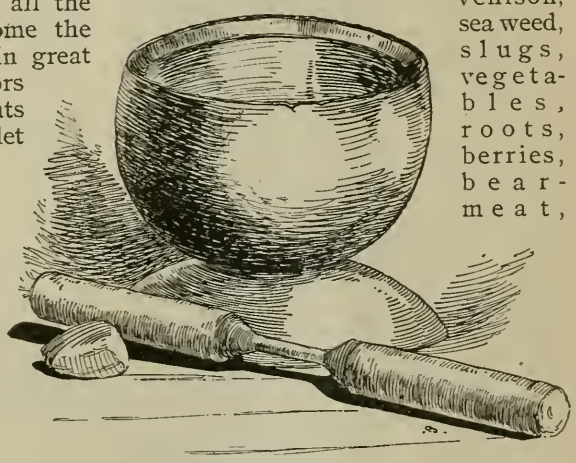
Among every nation, whether civilized or savage, are found some little superstitious customs, indissolubly connected with such important occasionsas the birth of a child; some trifling act by which the fond parents hope to secure a happy future for the new-born infant. To this end the mountain Ainos place a millet seed in its mouth, while the coast Ainos put a piece of salt fish between its lips. This, it is thought, will bring the child good luck and plenty all its life.

No matter at what hour a child may be born, it is given no food until a night has passed over its head. The women carry the children on their backs either in the loose clothing or a net. A strap passed over the mother's forehead assists her to support the little one's weight. The children are sweet and attractive little creatures, caressing and loving to be caressed. They are docile, obedient and helpful. Little boys are taught to salute like their fathers, and it looks droll to see little ones who can scarcely toddle, make their solemn little salutations and bows as they enter or leave the house.

Every one receives this mark of respect except the mother! The men are very fond of their children and fondle and play with them, but carry them in the arms in the usual European manner.

The Ainos have very few domestic animals, except large yellow dogs, used for hunting, and which, like their masters, look savage, but are gentle, though never allowed to enter the house.

Aino food is of the coarsest description, millet, fish (fresh, salt or dried), venison, sea weed, slugs, vegetables, roots, berries, bear-meat,



Aino Mortar and Pestle

mushrooms, in fact, anything they can get. A sort of clay is made into a most uninviting looking soup, which it really required too much courage to even taste. This clay is found in one of the valleys and when cooked, reminds one of a very thick and dirty potato soup.

Like the Japanese, the Ainos eat their solid food with chopsticks. Perhaps one of their most curious customs is riding tailor fashion. This they do with the greatest ease. To see an Aino, with his bare, hairy legs, and long bark coat, seated crosslegged on a packsaddle, his venerable face wearing a calm and benevolent

expression, makes so severe a strain upon one's politeness that a sense of the ridiculous is apt to utterly upset one's gravity. It is as if one of the patriarchs had suddenly returned to earth to give a circus performance! In spite of their total neglect of washing, they are a very healthy people. A slight skin affection is frequent with the children, and occasionally seen among the men, induced in the latter case by their constant irritation of gnat bites; this and perhaps an attack of bronchitis, are their chief ailments. The children never suffer from scarlet fever, measles, etc., though it may be remarked, by the way, that medical men have often observed how seldom the children in any part of Japan have these childish diseases, and how very trifling any attack is. The medicines used by these people are very primitive and the effect, if any, is due principally to imagination. Bear's liver, dried and pounded, is the chief panacea for all the ills the Aino flesh is heir to.

It is strange that living next to a race so extraordinarily fond of bathing as the Japanese, that the Ainos should be so entirely oblivious of the necessity of washing their bodies. The women dash a little water over their hands once a day, and this is the only washing that takes place among the whole household.

The houses are well ventilated and so smell sweet and clean, but the wood smoke stings the eyes as one enters, for though there is a hole for its escape, the mat hung before it prevents the free exit. The soot that collects on this mat is often used for tattooing purposes.

The coast Ainos are shorter and more liberally endowed with hair than those living in the mountains. One traveler has given an account of an Aino whose whole body was covered with fine black hair that was quite curly between the shoulders. His limbs were unnaturally long like those of an ape, and the body short and stunted. He seemed almost idiotic and was altogether a most unfortunate and repulsive looking creature.

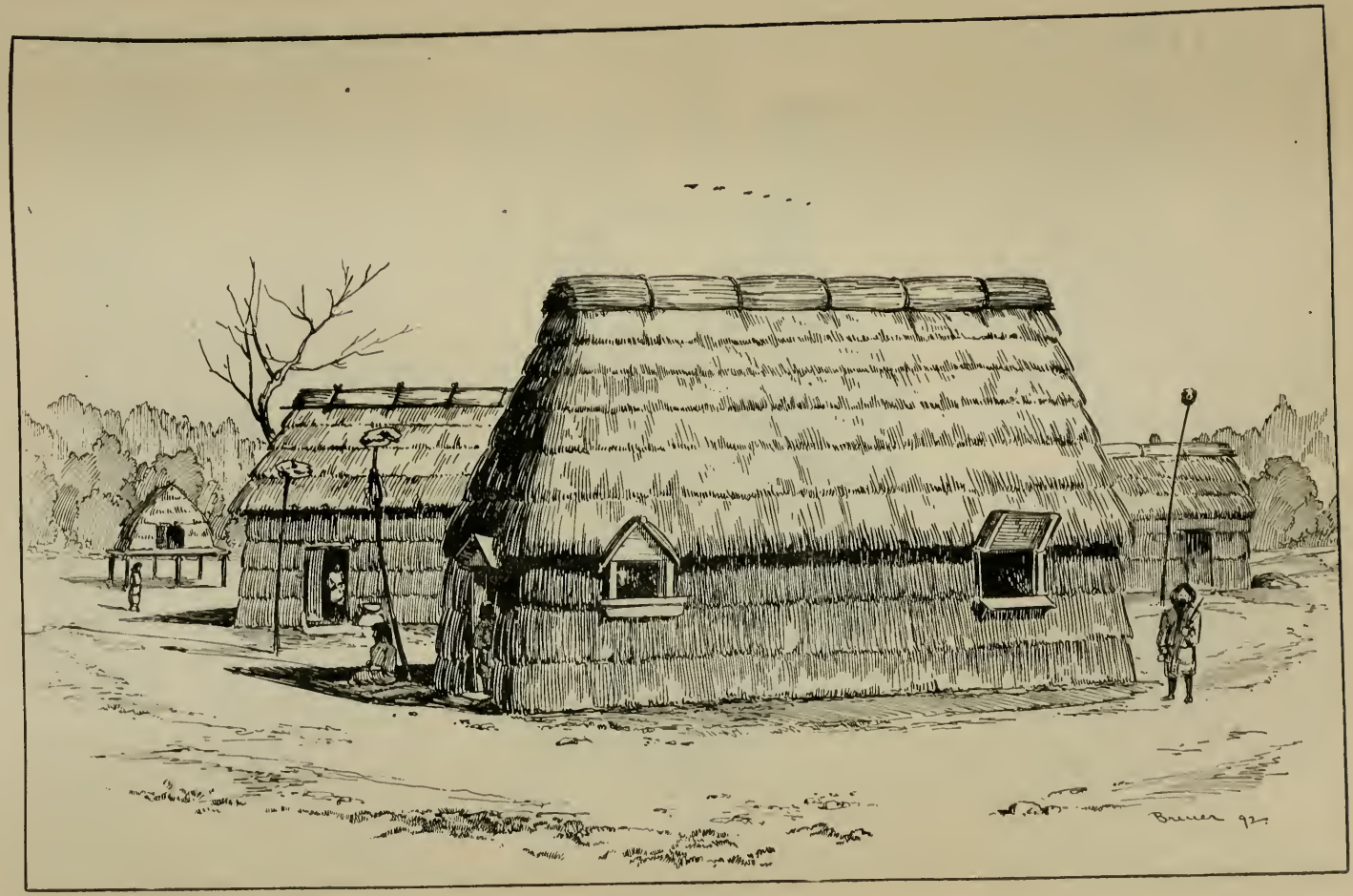
Though so very intelligent in appearance, it is an incontrovertible fact that these people are intensely stupid. In disposition they are very attractive; they are scrupulously honest, kind, gentle, most conscientiously truthful, humble, submissive, chaste and upright. They have but one great fault—intemperance.

The women are very industrious, and when not occupied with actual household duties, weave bark cloth. The men bring them this bark in long, narrow pieces of six or eight feet. The old women tear off the fine inner layer in strips, knot it carefully and roll it into large balls.

The weaving is done in the most rudimentary fashion possible. The younger women fix a large iron hook into the ground; one end of the bark is fastened to it and the other to the weaver's waist; over the ankles is placed a notched wooden frame like a great comb; a hollow roller to keep the upper and lower threads apart, and a carved shuttle, complete the very simple apparatus. It requires great skill and knack to supply just sufficient tension, and is very fatiguing.

On very solemn occasions, the Ainos use a terribly severe ordeal. If two men quarrel and the chief cannot decide which is in the wrong, a pot of boiling water is brought, and both the disputants must thrust the naked hand and arm into the scalding water. The man least burned is assumed to be innocent. This ordeal was also employed by the ancient Japanese who borrowed it from the Ainos.

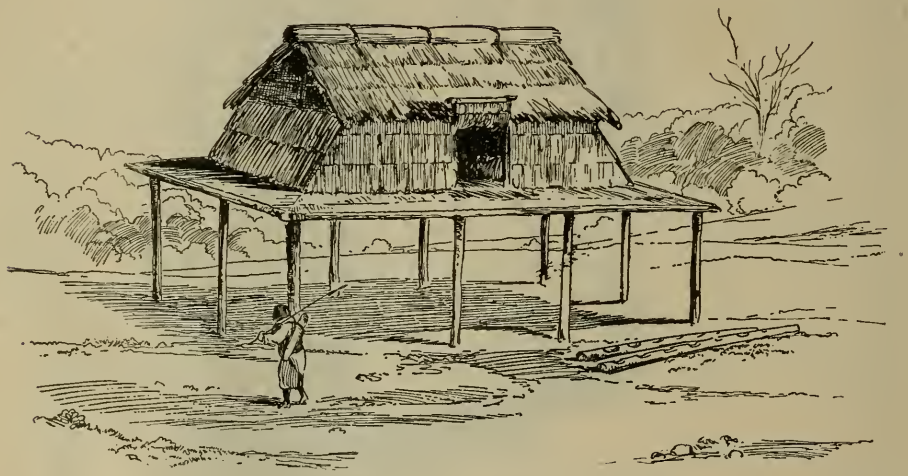
The men make their canoes of elm trunks, by simply hollowing out the center. It takes two men five days to make a fairly good one. For use on the sea, they lace together bark canoes, which are lighter and more manageable. The Ainos are not a wandering people, but are born, brought up and buried in the same place, one generation after another.



An Aino House

The young support and reverence the old, and are always kind toward them. Until the 17th century, the Japanese made no effort to colonize Yezo. Sometime during that century, it was granted to Matsumae Yoshiri as fief and he and his successors held it until the recent dissolution of the feudal system. The unfortunate natives were very cruelly treated and kept in a state of densest ignorance. It was made a penal offense for any one to teach them either to read or write!

has created a special department, the Kaitakushi, or development department, to look after their interests. At Satsaporo an agricultural college, modeled on the American college in Massachusetts, and a model farm have been established. A company has also been formed to develop the immense coal beds in Yezo which are rapidly becoming a source of wealth to the Japanese Government. About 11 years ago, when the Mikado issued the great proclamation granting his subjects constitutional government,



Kura or Store House

The curios found in every Aino dwelling and of which they invariably speak as "presents," it has been surmised, were probably given to their forefathers by Matsumae and his successors when the Aino chiefs went to pay him tribute. They value them very highly, and nothing will induce them to sell the most trifling one of them.

Their tribute was paid chiefly in skins, and to this day part of their Government dues are so paid.

The Japanese Government has determined to right their wrongs, and the Aino chiefs, dressed in modern attire, took part in the procession and were placed on a footing of equality with other Japanese subjects. This was a most wonderful and humane concession, as hitherto they had been despised and ill treated; but now, it is to be hoped, they have fallen upon better days.

In conclusion, the Ainos may be said to occupy a similar position to the Japanese as the American Indians do to the white inhabitants of the United States and Canada.

LIFE IN HONOLULU

BY BERTHA F. HERRICK.

NESTLING at the foot of bold, weird mountains, the volcanic summits of which are partially concealed by shifting rain-clouds, lies the metropolis of Honolulu, embowered in a wealth of luxuriant foliage, over-arched by a sky of deepest azure, framed in a gorgeous tropical rainbow —to the billow-tossed voyager, a vision of surpassing loveliness.

Entering an "express," or licensed rockaway, of which there are three hundred in the city, we are borne from the steamer landing quickly along shady, foreign-looking streets to the peace and quiet of an island home.

Hawaiian hospitality has passed into a proverb. The stranger, well-introduced, or depending merely upon his individual merits, may be assured of a hearty welcome to a refined and cultivated society.

The attractive villas, lining the winding avenues, are seated in the midst of wide lawns of Bermuda grass, and surrounded by myriads of exotics, among which are many varieties of towering palms, fine specimens of the banyan-tree, bread-fruit, algaroba, oleander, tamarind, monkey-pod, alligator-pear, traveler's-tree, and the hibiscus, or celestial rose; while bananas, guavas, pine-apples and mandarin oranges may be had for the gathering.

The architecture of Honolulu is usually unpretentious, the dwellings being often one-storied structures of wood or stone, supplied with numerous verandas, smothered in bougainvillia and blossoming passion-vines, or other hardy creepers, which are extended completely over the lava drive-ways, by means of trellis-work.

Everything suggests comfort, ease and luxury.

The rendezvous of the household is the broad, cool *lanai*, or main piazza, where wicker-sofas, lounging-chairs, hammocks, and tables with the latest magazines invite repose and sociability. When the attentions of the sportive mosquito become too assiduous, resort is sometimes made to large cages of fine wire netting. From this delightful open-air retreat, double doors, composed of adjustable wooden shutters, lead directly into the principal apartments. These portals stand ever open throughout the day, visitors being received at all hours, beggars, peddlers, burglars, and prying junk-men being practically unknown.

From cellar to garret the floors are uniformly covered with white Chinese matting, on account of the heat and the ravages of insects.

Firesides there are none, so the only chimneys are those connected with the kitchen ranges, the culinary departments being separated from the main buildings by passage ways of lattice work.

The telephone is constantly employed on every possible pretext; and is apparently an indispensable institution, there being over 11,000 instruments to a population of 25,000.

The home dress of the "foreign," or white ladies, usually consists of a muslin *holoku*, or "Mother Hubbard;" and the church or visiting costume of white lawn, pongee or India silk. But often they step into their ever-waiting carriages in loose morning-gown and slippers, supplemented by shade hat and silk gloves, and shop at leisure from the curbstone.

The climate of this "Paradise of the Pacific" is not a little peculiar. During the winter (?) months it may rain for seven days, but dust will be flying on the eighth, — the water

rapidly soaking into the porous coral-line soil. Occasionally furious showers like cloudbursts sweep suddenly over the city, drenching one side of the street, while the other is basking in radiant sunshine. The trade-winds descends like a heavy curtain calling into requisition numerous electric lamps. The silvery moonlight evenings, however, possess an indescribable witchery that affects the most misanthropic.

Queen Lilinokalani

blow for nine or ten months beginning in April. The *mauka*, or mountain wind is conducive to health; but a southerly breeze is known among the natives as the "sick wind."

Nocturnal displays of heat lightning are of frequent occurrence.

There are no lingering twilights; but immediately after sunset, darkness

Then the Royal Hawaiian Band gives open-air concerts in one of the many tropical parks which are illuminated by torches and Chinese lanterns. The broad, smooth roads are alive with teams and with gay parties of young horse-back riders.

Society is broken up into cliques, the two principal factions being

familiarly known as the "Government Crowd" and the "Missionary Set." The former consists mainly of Hawaiians, half-whites and English, and the latter of Americans or descendants of the early missionaries.

Social life is paramount. What with receptions, five and seven o'clock teas, dances, "*Luaus*" or "poi-suppers," lunch parties, attendance upon political demonstrations, drives to historial points of interest, Saturday afternoon baseball matches, lawn-tennis tournaments, musicales and lectures, visits to men-of-war in the harbor, amateur theatricals and evening bathing parties, the visitor is very busily occupied.

Attention is naturally first directed to the Royal or Iolani Palace, an imposing three-storied edifice of concrete, containing 40 rooms, and surrounded by park-like grounds some acres in extent. To the right of the main entrance is the throne-room, an immense apartment, hung with draperies of deep crimson, and in which are the dais, the famous yellow feather cloak, the crown and scepter, coat-of-arms and other insignia of sovereignty.

The reception-room and banquet hall occupy the opposite wing, while in the upper story are the sleeping apartments, the library and the music-room.

Furnished throughout by professionals, it abounds in all that is rare, rich and luxurious, and costly gifts from European and Asiatic rulers add greatly to the general interest.

The King's New Palace

Queen Lilinokalani is an intelligent, cultivated Hawaiian woman, in middle life, endeavoring to creditably perform the duties of her difficult position. Although now in mourning for the late Prince Consort, she is usually prominent in social circles, and is on terms of friendliness with the white ladies of the capital, and an active promoter of public schemes of a philanthropic nature. The Dowager Queen Kapiolani, widow of the late King Kalakaua, is of a quiet and retiring disposition, and is much beloved by the natives.

The sole heir to the throne is the Princess Kaiulani (whose full name is Her Royal Highness Princess Victoria-Kawekiu-Kaiulani-Lunalilo-Kalaninuia-Kalapalapa), a sweet-faced young half-white of sixteen, daughter of the late Princess Likelike, at present being educated on the Continent.

It has long been the custom for the reigning Queen to give monthly outdoor receptions or garden parties to residents and tourists. On these very enjoyable occasions, she is assisted in receiving and entertaining her guests by connections of the royal family, the Chamberlain of the Household, Members of the Houses of Nobles and of Representatives, dusky maids of honor in gorgeous satin *holokus*, the native militia, and the Royal Hawaiian Band.

Invitations are presented at the palace gates, which are guarded by some half-dozen of the Queen's own guard. Her Majesty is usually seated on the emerald lawn, under the shade of a spreading tropical tree, and is accompanied by the Chamberlain, to whom are handed cards bearing the name and country of the visitor.

Then ensues the formidable ordeal of introduction, and of bowing and backing out of the august presence, conscious that one is the cynosure of a hundred or more critical eyes. Mental equipose is, however, speedily restored by watching the presentation of the next arrival.

Behind the Palace are the "Bungalow," a low, latticed structure, containing the private apartments of the monarch, and the "Barracks," a

The Hula Dance

castellated building, harboring the Household troops as well as the gun carriages, cannon balls, and the gilded chariot of state.

Immediately across the road is the Government building, in which are the court room, offices of Ministers and Justices, Treasury, Law Library, and the National Museum, where are exhibited many valuable ancient Hawaiian curios, conspicuous among them being spears, drums and war clubs, necklaces of human teeth, immense feather plumes or "*kahilis*," "*tapas*," and an enormous red and yellow feather helmet, said to have been worn to battle by some stalwart high chief.

In the spacious court room are held the ceremonies attendant upon the opening of Legislature, which brilliant pageant may be feebly described as a bewildering mixture of feather cloaks, stars, badges and orders, "kahilis," pages and train bearers, judicial wigs and gowns, ministerial vestments, gold lace, brass buttons, epaulets and clanking swords, *decolleté* dresses and swallow-tailed coats, waving flags and bursts of triumphal music.

The public buildings of brick or coral rock are numerous and handsome, the eye being especially attracted by noble institutions of learning or benevolence.

Oahu College, from whose halls have been graduated many of the children and grandchildren of the early American missionaries, is picturesquely situated in the suburbs, and its wide grounds are surrounded by a thick hedge of the beautiful night blooming cereus.

The group of Kamehameha schools are handsome, well-endowed establishments, where native boys receive a thorough industrial training; and Kawaiahao Seminary is an admirably conducted home school for native girls.

The Queen's Hospital nestles under the shadow of avenues of majestic date palms, and is well nigh buried in cataracts of blooming creepers.

Mention must also be made of the cool and airy Hawaiian Hotel, the center of municipal interest, where many distinguished guests have been entertained and which is a feature of life here.

The Central Union Church, opens wide its doors to all Protestant denominations, as well as the Congregational, and there are also two flourishing native churches. The list of places of worship is completed by a massive Episcopal Cathedral, a Chinese Church and a large Roman Catholic Church for the Portuguese.

Ancient Idol

Native money is in general circulation, and bears the National motto—"Ma mau ka ea o ka aina i ka pono"—The life of the land is established in righteousness.

Native Musicians

The city is extremely cosmopolitan —Chinese, Japanese, Portuguese, New Hebeides, Gilbert Islanders, Australians, Micronesians, Germans and Samoans all being largely represented. Some of the Chinese are respected merchants and lawyers, and live in snug residences surrounded by picturesque tea-gardens, and drive in their own carriages.

bowl, an extinct crater in the rear of the city, there is obtained a grand, panoramic view of the surrounding country and ocean.

Open street-cars convey the sightseer to Kapiolani Park, and excursions are made to Pearl Harbor by means of the new Oahu Railway.

The natives are large and finely formed, usually inclining to stout-

An Hawaiian Type

So densely populated a section is Chinatown, that it is easy to imagine one's self on Dupont or Sacramento streets in San Francisco.

All tourists visit the Pali, a sheer precipice of a thousand feet, over whose brink Kamehameha the Conqueror, drove the forces of the King of Oahu. From the summit of Punch-

ness, which is considered a beauty. Their skin is a bronze-brown, and their hair black and straight. The men wear the regular working-man's dress, to which they add finishing touches in the shape of gay Bandana handkerchiefs, and wreaths of brilliant natural flowers; and the women, or *wahives* adorn themselves in bright

calico *holokus*, and *leis* of peacock-feathers, shells, beans, seeds, or fragrant *maile* vines.

Both men and women of the lower ranks commonly go barefoot, and are equally addicted to cigarette-smoking.

Life moves very smoothly with these children of the sun—nature furnishing the maximum of harvest for the minimum of labor.

said of a Kanaka that he will walk three blocks to get a horse to ride across the street.

Natives are also employed as city policemen, but their duties appear to be exceedingly light, owing, possibly, to the inertia of a warm climate.

The Hawaiian language is flowing and musical, every word and every syllable ending with a vowel. Some

Palms near the King's Hospital

Some hold office under the Government, but their principal occupations are taro and banana-raising, fishing, poi-pounding, weaving mats, baskets and necklaces to beguile the departing tourist; manufacturing head-gear of cocoanut, pumpkin or palm fibre, and the mid-ribs of maiden-hair ferns; surf-bathing, sleeping, singing, and especially horse-back riding. It is

of the native words are in every-day use among the white residents. Thus *aloha* is an expression of greeting, farewell, gratitude or affection; a *pilikia* indicates an awkward or disagreeable situation of any kind, from a house on fire to a scratched finger; *pau* is finished or completed, and *tabu* is anything forbidden.

Sooner or later foreigners are

initiated into the mysteries of the *luau*, or Hawaiian feast; which consists of pork, chicken and taro-fed dog, baked in rude underground oven; mullet, devil-fish, limpets, sea-urchins, mussels, live shrimps, sea-mosses, raw fish and other marine delicacies, as well as the celebrated *poi*, and yams, cocoanuts, rice, plantains, guavas and kukui-nuts.

Mats are spread upon the floor or ground and covered with sweet-scented ferns in lieu of a tablecloth. Rushes take the place of seats, and everything is eaten with the fingers, while song and laughter are invariable accompaniments.

The fanna of this vicinity is not extensive. When the patron saint of the Emerald Isle rid that fair country of its superfluous serpents — perhaps some ancient Hawaiian deity, not to be outdone by Irish enterprise, drove from these coral islands not only their venomous reptiles, but all other land vertebrates as well; for indigenous animals there are none worth mentioning, though articulates and insects come nobly to the front to take their places.

Fishes are found in many varieties, and are brilliantly tinted and curious.

Only a few kinds of birds are ever seen on this island, the chattering mynah and the thieving rice-bird being the principal representatives.

The seaside resort of the Honoluluans is beautiful Waikiki, situated some three miles distant from the metropolis among groves of lofty cocoa-palms and guarded by the hoary old crater of Diamond Head.

Here are well-appointed summer homes occupying grassy, shaded terraces, immediately above the long stretch of silvery beach which commands an unbroken view of the boundless sapphire-hued Pacific, upon whose gently-swelling tide many brave vessels ride at anchor.

The bathing is perfection — the waves expending their main force upon a coral reef, a quarter of a mile from shore, and there being no fear of chills, sharks or quick-sands.

Out-riggered canoes bound lightly over the booming surf in search of finny prey; while nimble fingers strum the responsive "taro-patch" fiddle, or wandering native serenaders make the night air musical with their plaintive melodies.

The commercial interests of the islands are so interwoven with the social life that some mention should be made of them. Probably the most important business interest is centered in the large sugar plantations that are found all over the islands and which have given the islands a world wide reputation and name.

Statistics are dry and it only need be said that the wealth derived from this source has filled the coffers of the islanders for many years. It is because of this rich production that the question is continually rising as to the possibility of annexing the islands to the United States, but as this is against the fixed policy of this government it will probably not be accomplished in our day. These islands of the sea are happy in peace; few, if any internal discords occur, and these soon blow over and it will probably be many years before the happy isles will be disturbed by outside nations, or alien political interference of any kind.

The islands will undoubtedly soon be connected with the outside world by a cable. The United States Fish Commission Steamer *Albatross* has been over the ground between the Sandwich Islands and San Francisco, and at the present time is on ground again surveying the route, details of which will soon be given to the public.

This will bring this favorite resort nearer home and take away the one objection it now has as a winter resort, the impossibility of reaching it by telegraph. The islands are growing in popularity — even winter finds the fine hotels crowded with visitors from all over the world who spend the months in a round of pleasures in

the open air. The climate is delightful and health-giving and many of the homes are owned by those who were once invalids but who have gained a new lease of life in the heart of the Pacific.

There are two ways of reaching these islands in the Pacific. The first and possibly the most comfortable, by the steamers of the Oceanic Steamship Company, of whom John D. Spreckles and brothers are proprietors. There are five large and commodious steamers on the route, and for one, at least, the *Alameda*, I can bespeak a most delightful equipment, everything being done by the officers to render the trip a pleasure. Mark Twain wrote in the log book :

"No alien land in all the world has any deep, strong charm for me but that one ; no other land could so longingly and beseechingly haunt me, sleeping and waking, through half a lifetime, as that one has done. Other things change, but it remains the same. For me its balmy airs are always blowing, its summer seas flashing in the sun ; the pulsing of its surf beat is in my ear ; I can see its garlanded craigs, its leaping cascades, its plumy palms drowsing by the shore, its remote summits floating like islands above the cloud-rack ; I can feel the spirit of its woodland solitude ; I can hear the plash of its brooks ; in my nostrils still lives the breath of flowers that perished twenty years ago."

If the tourist wishes a longer stay upon the ocean, he can take passage on the sugar schooners that ply between the islands and San Francisco, but the ideal trip is one made on the *Alameda* or her sister ships that take one as if by magic into the heart of the Pacific tropics.

The sights and scenes of this lotus-eating land, with its grand volcanic scenery, its wealth of tropical vegetation, its political pomp and commercial enterprise, its happy homes and loyal hearts, its summer air, its music and gorgeous sunsets, dwell ever in the memory; and no stranger leaves its hospitable shores without a lingering backward glance and a regretful *Aloha Oe* to *Hawaii Nei*.

THE BLUE ANGEL OF ELBINGERODE

BY WILLIAM H. CARPENTER

ONE evening in late September, a group sat about the fire in an old farmhouse on Cape Cod. Out of doors, a brisk wind had driven away the last vestiges of a rainstorm that had persistently beaten all day, and the night was clear and cold—the first definite announcement that summer had gone and autumn had arrived to take its place. The fire that burned brightly in the little low-ceiled room was, accordingly, a necessity, but it had acted as an inspiration upon those about it, and each one, like the host and his guests at the Wayside Inn in the poem, told a story, real or imagined, as he chose, for the common entertainment. The pedagogue had told his tale, as had the painter and the poet. Emerson's lines over the fireplace—"This night shall be my Germany of mystic philosophy and dreams"—prompted the professor, when his turn came, to recall an actual experience that had once befallen him, and this is, in his own words, the story he told.

In July, 188—, three Americans were studying German at the house of Dr. P——, in Brunswick. With this clientage, the apartments then occupied were inconvenient and cramped, and it was decided to take a roomier house in the newer part of the town. It was accordingly suggested by one of the students and heartily seconded by the Frau Doctor, that while the family goods and chattels were being transferred to their new quarters, the young men should take a foot tour up into the not distant Harz mountains. A guide-book was therefore obtained, the route carefully mapped out beforehand, and with little more than scrip and staff the three started one bright morning, in a third-class compartment on the train, for Harzburg, whence they were to set out on foot to the unknown regions beyond.

They had already walked a week, when one evening, just at nightfall, they arrived in their chronic condition of hunger and thirst at the little village of Elbingerode, which you will find by the map, if you care to look it up, is far back in the mountains. It was not hard to choose an inn, for, although there were several in the place, we had already learned from the guide-book that one, "The Blue Angel," was *za empfehlen*, particularly on account of its *cuisine*. We found it in the long, straggling street, and over the door a blue angel with a broken nose stretched its wooden wings and justified the name of the hostelry.

Within, the general air of neatness that pervaded everything, from the carefully sanded floor to the white cloths on the tables in the long, low guest-room, was the prevailing characteristic. A party of Goettingen students, also on a foot tour, entertained us and themselves during the evening with songs, one of which was cleverly illustrated in chalk on a door that had been brought in with much mock ceremony. After having eaten, drunk and made merry in a wholly rational manner, we helped ourselves to candles from the common stock in the hallway, and at a seemly hour lighted ourselves to the room that had previously been assigned us in the second floor of the inn.

The bedroom, since it plays an important part in the story, were best described in detail. It was in shape almost square. The door from the passage entered it in the middle of one side. In the side opposite were two windows opening into a court-yard. The wall to the right of the

door was unbroken. On the left, nearly in the center, there was, however, what was apparently a sliding window, which one of us tried and found securely closed. There were three beds in the room—one in each corner to the right of the door and one directly under the sliding window on the left. Quite by accident, the bed under the window fell to my lot, and almost immediately, following the example of my tired companions on their side of the room, I was ensconced in it and soundly asleep.

There had been no conscious lapse of time. It might have been an instant or an eternity for aught that I could realize, when all at once I was awake and sitting upright, gazing at the window over the bed in an agony of fear that brought the perspiration out upon my forehead and made me shake as if in a palsy. I had heard nothing and seen nothing, but while I continued to look with a dreadful fascination, noiselessly a face appeared at the window, pale and distorted. The moonlight from one of the other windows fell full upon it, and I could see every feature with an unmistakable distinctness—even the heavy welt of a scar across the forehead at the edge of the hair, and a smear of blood that looked red and fresh over one cheek. For an awful instant the wild eyes met mine with a flash of recognition, and then the whole vanished as noiselessly as it had come.

Then, at last, in unreasoning terror, I sprang from the bed and crouched on the floor of the room. Both of my companions, awakened by the noise, started up and eagerly asked what was the matter. As soon as I could, I excitedly told my story, which was received with a manifest incredulity that my earnestness did not dispel, and an investigation was at once proposed. We found the sliding window fastened from the other side, but a candle held up to it, while it did not reveal the whole interior, showed that there was absolutely nothing at all in the room as far as could be seen, not even a piece of furniture of any sort. The next door along the passage, that unmistakably led into the room, was locked. A glance from the other windows of our own room into the court showed a bright moonlight night in which everything could be seen almost as distinctly as by day. Overhead, a cloud now and then floated lazily across the patch of sky visible from the window, but there was nothing ghostly or unusual in any of the surroundings, without or within. While we stood looking out of the window, a bell close by sharply rang out a single stroke, and the hourly song of the watchman came faintly from the distant street. There was clearly nothing to do but to go back to bed, and with the admonition not to disturb them with any more nightmares, however interesting they might be, my companions settled down again to sleep, as was soon apparent from their regular breathing. As for me, I had had all the sleep vouchsafed me for that night, and I was glad when the long hours had finally dragged themselves by and it was time to get up to dress. I had to submit them to a further incredulous questioning about the episode of the preceding night, and was finally almost ready in the sober light of day, to believe with the others that I had only had a most vivid dream.

I was, however, in this belief soon set aright. Below stairs, the head waiter greeted us with a "Good morning, gentlemen. Have you heard the news?"

Of course we had not, and he continued: "There was a murder last night, just around the corner."

A young man of the place, he told us in response to our questions, back from his military service on a furlough, had before his departure gained the affections of the daughter of the village cobbler. He now had finally asked the father for the hand of his daughter, but he was a worthless

The Face at the Window

fellow, and the father had flatly refused his consent. This had led to high words between them, and beside himself with anger, the younger man suddenly snatched up a knife and buried it in the other's breast.

"And the murderer?" I eagerly asked.

"He has escaped."

"What time was this?"

"A few minutes after half-past twelve o'clock."

I was trembling with a new excitement. "Has the murderer a heavy scar straight across his forehead?" I eagerly asked.

"Yes," he said with astonishment. "Do you know him?"

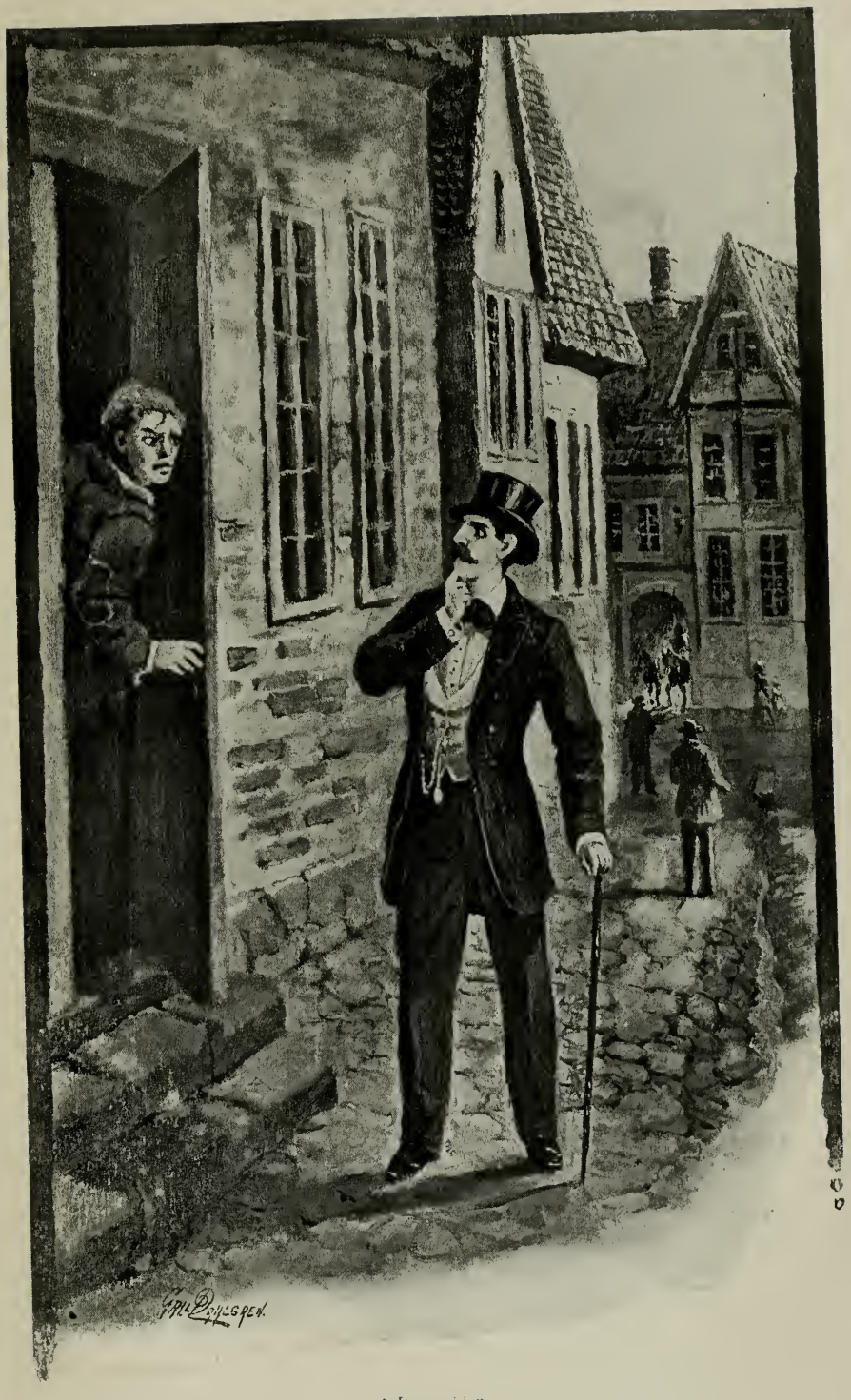
I asked for a further description, and as I had surmised, it was the face I had seen at the window during the night.

We had the host summoned at once and to him I told my story. He avowed, however, that it was utterly impossible for any one to get into the vacant room, since he had locked the door himself no longer ago than the morning of the preceding day, and the key was still in his possession. A gendarme was, nevertheless, immediately summoned, and led by the host, we proceeded to the room in question. The door was really locked, of that there was no doubt; and when, with a great show of courage, but with evident trepidation, the official had finally opened it, there was nothing to be seen, no more, in short, than the candle had revealed the night before; and what we had not been absolutely assured of in our previous examination, the room had no other entrance than the window, which was securely nailed, and could not be moved from either side.

I had the opportunity later in the day, of telling my story once more to the police authorities of the village, who plainly had arrived at a wholly matter-of-fact conclusion as to the manner of my mysterious visit, although they made no pretense whatever of explaining its possibility. My narrative, accordingly, was taken down in all its details by the clerk, and duly signed and attested. My address was also carefully noted, and with the intimation that it might be necessary to summon me as a witness, as one who had seen him after the deed, in case the murderer were apprehended, I was, for the time being, dismissed from the case in which I had played such an involuntary part.

It was, with no small satisfaction that as soon as possible that afternoon we shook the dust of Elbingerode off our feet and set out again on our way, for the episode had not been a pleasant one. The remainder of the foot tour was without important incident, and has left no particular impression. I only remember that even when we were again back in Brunswick, I felt a haunting nervousness at night, but change of scene finally made me forget it, and when in October of that same year, I went on to Leipzig, to enter the University, it was fair to become ultimately, only an indistinct memory.

Most strangely, however, it was not destined to die out, but was revived in a way that has made it all one of the most well remembered incidents of my life. I had been in Leipzig two months, when one day, the 14th of December—the date even has remained in my memory—having taken a longer walk than usual, I was hurrying, late in the afternoon, to my lodgings in the Keil Strasse, through one of the narrowest streets in the older part of the town. I was not quite sure of my direction, and was wondering where the crooked street would lead me, when my attention was suddenly attracted to a man who came to the door of a house just in front of me, and after looking up and down the street, as if in search of somebody or something, had drawn back again into the passage and closed the door behind him. The action in itself was not suspicious, and would have passed unnoticed in a more crowded thoroughfare. It suddenly struck me, however,



A Foreigner

that I had seen the face before. I had caught but a momentary glimpse of it, but surely it was not unfamiliar. I stood still to puzzle it out, but all at once it came to me with the certainty of conviction—it was the face I had seen in the inn at Elbingerode!

I quickly decided what to do, and accurately noting the number of the house, I hastened off as rapidly as possible to the *Rathhaus* in the market and told my story to an incredulous official, who only reluctantly at last decided to send a policeman to apprehend the man upon suspicion, in case he should be found. I was asked to accompany the officer to make the identification. To make a long story short, we finally discovered our man in the smallest and poorest room in the very garret of the house. We had learned where he was probably in hiding, and entering the door without knocking, came upon him quite unawares, as he lay awake upon the bed, covered up with the bed clothes to keep himself warm in the fireless room. He was pale and emaciated; his spirit had been broken, apparently as much by hunger as by remorse or fear of apprehension, and he made neither by word nor sign the slightest protest to his arrest. There was, however, not the faintest doubt as to his identity. There were the same wild eyes that had stared in upon me through the window, and across the forehead was the scar that I had seen so distinctly in my terrible vision.

We took the prisoner back to the *Rathhaus*, where the identification was made complete by means of the photographs and descriptions that had been sent out by the authorities at the time of the murder. An examination was set for the following morning, and after my name and address had been taken and my card of legitimation from the University carefully scrutinized, I was told to appear to give my evidence as to the identity of the prisoner at the appointed time.

There is little more to be told. When the next day, I appeared at the department of police, as directed, I was told by the official in charge that there was no further need of my services, for the prisoner had taken the matter into his own hands during the night, and lay dead in his cell. I shuddered as I thought of my own instrumentality in the outcome of the tragedy, though the ground for such a feeling were wholly sentimental and only justice had been done.

I was not yet destined to hear the last of the episode, for in order to secure the reward that had been offered for the apprehension of the murderer, a journey was finally necessary, in the middle of winter, up into the mountains to the little Harz village where the first scenes of the story were laid. What more than made up to me, however, for any discomfort I was obliged to suffer was the satisfaction I had of giving the considerable sum ultimately paid me into the hands of the almost destitute widow, whose support had been so ruthlessly snatched away. At this time I again took the opportunity to look over the ground with the utmost care, and examined once more the door and the window of the still vacant room next the chamber in which we had slept. The window was nailed up, as before, and there was no other possible entrance except by the door which now, as then, was securely locked. From every possible point of view since then, I have thought the matter over, but with no satisfactory explanation; and to this day, ten years or more after the episode, I am still as much in doubt as ever as to what I saw at the window of the Blue Angel of Elbingerode.

Columbia College, New York

AT THE DRY TORTUGAS DURING THE WAR

A LADY'S JOURNAL

(*Commenced in January number*)

[The history of the late war has been well treated in various publications, but that portion relating to the famous Dry Tortugas prison, where thousands of men were kept during the war, and where those connected with the assassination of President Lincoln were confined, has never been described, yet the events are now of great historical value. The island upon which the great prison was established was a sand band comprising but thirteen acres, — one of the last of the keys representing the end of the great Florida reef. For seven or eight years a lady, the wife of one of the surgeons, lived in this isolated spot and viewed all the incidents from the appearance of the first war cloud until the declaration of peace. The following chapters were not written or intended for publication, the events being jotted down simply for friends in the North; and THE CALIFORNIAN has been enabled to give them to the public in a series of chapters, believing that many are of historical interest and value, and also as showing the singular life of a lady in one of the most out-of-the-way spots in this country.]

THE 2d of March, 1862, brought many changes to the Dry Tortugas. A transport arrived with a new regiment — the Seventh New Hampshire — and with orders for the Wilson's Zouaves to be transferred to Fort Pickens, up the Gulf and nearer the seat of actual hostilities. This change of command brought its excitement and the garrison was in confusion for several days.

There never had been more than five or six companies on the island at one time, and there were no accommodations for more, yet here came a full regiment of one thousand men and the question, "Where should they be quartered?" was a serious one. The parade was quickly converted into an impromptu camp-ground; tents were pitched, guns stacked, and, as if by magic, camp-fires appeared with men sitting around eating, their knapsacks serving as tables, or reading the letters they found awaiting them. All were evidently delighted to be on shore even though the island was not larger than one of their fields at home in New Hampshire.

The bastion near our house, into which we had moved a short time previous, was turned into a temporary kitchen for one Company, and the call we heard daily, "Fall in Company I!" may recall to some the mystery and joke that for several days surrounded it.

As they marched up, ninety strong stalwart men, each with his shining tin cup and plate, suggestive of a New England kitchen, they still bore the air of the farm and their rugged hills, despite the gilt buttons and army blue, and we felt instinctively that we need have no further fear of mutiny and that the drilling they would undergo would make them, in a short time, a regiment the army would be proud of.

The scene in the moonlight, looking down from the ramparts upon their white tents among the mangrove trees, was charming, if one could forget that this same picture in another place must later mean a camp-ground with a battle field not far distant, blood, carnage, the whistling of cannon balls and the "zip" of the bullet, and broken hearts and homes.

The regiment came in two detachments, several days intervening. The last steamer ran aground on one of the islands, creating some little excitement in the garrison as the *Union*, a small steamer "wrecked" and brought them in. Colonel Putnam of the New Hampshire Regiment was a descendant of the Putnam's of Revoluntionary fame and looked well worthy the name — a remarkably handsome man of com-

manding appearance, idolized, as we found, by his officers and men.

Following their arrival came exciting news. A steamer arrived, bringing accounts of the fall of Nashville and the capture of ten thousand prisoners and the encounter of the *Merrimac* and *Monitor*, at which enthusiasm among the troops broke all bounds. Much to our regret, the next day, Dr. Hammond and Colonel Brooks took their departure. The companies of the latter's regiment formed a double row for him to pass through, and as he went on board the steamer a salute was fired; then the troops marched up on to the ramparts and stood until the steamer passed out the workmen, who were there also giving him three rousing cheers, while flags were waved. And so we lost our brave "little Colonel."

We were not yet to settle down quietly. The next mail brought orders for Captain Morton to go to the front — a move which delighted him but which was a great blow to us. He was a very dear friend, and it was with sorrow we bade him good-bye, little dreaming that his career was so soon to be ended.

The temporary hospital tent for the regiment was not far from our house, and as it overflowed, my husband offered them half of his engineer hospital outside the fort until they were settled in one of their own. Some of the men were ill on their arrival, having been taken when about half way out from New York.

One day as my husband passed through the ward containing the patients of the New Hampshire Regiment, he saw something that startled him, and calling the surgeon out he asked him what was the matter with his men. The latter replied that they had colds and some fever.

"But what is that eruption?"

"Nothing serious I think," replied the surgeon.

An examination, however, resulted in its being pronounced smallpox.

Our fright for a while was, to say the least, rather in the nature of a panic. The new cases were sent to Bird Key and put in tents; but, fortunately, the disease was confined to the regiment, none of the other men taking it. There were only about forty cases in all and six or eight deaths.

To add to the unpleasantness at this time, we were again put upon a short allowance of water. It would have been a sorry report to send to Washington of fourteen hundred people on a short allowance of water, with smallpox in their midst, confined on that little island and a few barren keys at the beginning of summer. Colonel Putnam sent to New York for water condensers, so that we could have the cistern water for cooking, and was making ready a schooner to send to Havana for water, as they were as badly off in Key West as we were, having only sufficient for twenty-four hours, with three thousand troops besides the citizens, and having already sent to Havana to buy water, when the heavens opened and our cisterns were filled.

When it rained we felt, as some one expressed it, as though we were above the strainer, so solid did it come down. The condensers when they arrived were put in use to fill the cisterns with fresh water in case of fire on the works. It was astonishing how much more water one required when on an allowance.

The steamer *Nightingale*, a gunboat, now came in, staying long enough to give us great pleasure in the society of Doctor R——, who knew so many of our friends that we were soon on the footing of old acquaintances. I remember his bidding us good-bye, one Saturday evening as the steamer was going out to the buoy at night, to start early the next morning. But Sunday morning before we were down stairs we heard his voice calling to us that he had fifteen minutes to spare and he had rowed in to say good-bye again. In those times and with our peculiar environments, we formed strong

attachments, especially if the people came from New England.

That week brought my sister after a long visit in Key West. It was like a bit of home to us and every addition to our circle of ladies, brought new life and pleasures to all. We had a variety of musical talent among the men. The regiment had a band, and there were some excellent performers on stringed instruments among the colored boys who were always ready for a serenade or to go on the water. Our little amusements were good for all. They prevented the officers from being as restless as they usually were when news of victories came and they felt that others were having all the glory while they were idling away their time in this out-of-the-way place.

News was always late and often fragmentary, leaving much that we could not fill in. We heard of the battle of Shiloh and the capture of Island No. 10 in the Mississippi, and on the 6th of May report reached us of the capture of New Orleans on the 25th of the preceding month. The news came the evening that Mrs. A—— was giving a dancing party, and the exuberant spirits of the officers made the affair an unusually pleasant one.

A trip to Loggerhead Key was our longest outing, the farthest we could go and feel within our own domain. The Key which was three miles distant had a fine light-house upon it, and the keeper and his wife always gave us a welcome and possession of the house. The island was a mile long and a little more than a quarter of a mile wide, covered with prickly pear and mangrove bushes. It was a favorite haunt for the turtles in their laying season, and our most exciting expeditions were at those times, for the turtles chose moonlight nights. We took three boats, with music for dancing and supper, making a grand frolic of the occasion.

After supper, enjoyed in the light-house living-room, the ample kitchen was converted into a ball-room and dancing indulged in until it was nearly time for the turtles to come up when, taking our shawls and wraps, we started for the beach. Dividing up into parties of six we stationed ourselves like a picket along the shore, not daring to speak aloud, as the least disturbance would alarm the turtles and deter them from coming on shore.

The nights were superb and so warm and dry that one could sleep with impunity in the open air, if they chose, during the waiting; but the excitement of watching for a ripple, and the gentle splash of the turtle's flippers as she cautiously came in, crawling up over the white sand, stopping occasionally as though listening for an enemy, kept us awake. If the turtle was not alarmed she went up above high-water mark, and with her flippers scooped out a large, round, hollow place, then depositing her eggs, sometimes from two to three hundred; but if she heard the slightest noise, if anyone was so unfortunate as to step on a twig that crackled, the huge creature would turn and make for the water at a marvellous rate of speed. Experience had taught us to be very wary, and if those to whom this sport was new forgot in their excitement that silence meant success they received a sharp nudge or a handkerchief suddenly placed over their mouth, with very good grace.

After the eggs were deposited and covered with sand the turtle would turn and leisurely crawl toward the water, leaving the sun and heat of the sand to act as incubators. Then came our grand *sortie*. Having signaled the party beyond us, we both gradually and silently crept along, until the turtle was on her way to the water, when the gentlemen would make a dash, going between her and the water, to turn her course, if possible, seizing hold of the huge shell to turn it over.

But it was usually a hard struggle, as the sand that could be thrown with

those short awkward flippers was a means of defense that made holding on to the huge creature no trifling effort, for they sometimes weighed several hundred pounds and fought for their liberty with great violence. It would take the combined strength of several strong men to turn one and often after several attempts they failed; one's valor cooled with eyes full of sand, and a blow from one of the flippers was not a gentle pat by any means.

When they succeeded in getting the creature upon her side the ladies were allowed to take hold of the shell as they dropped the animal over on her back so that they could say that they had helped to turn a turtle — a vain imagining, if the truth must be told. As soon as the turtle was on her back she was perfectly helpless, and we could go and leave her for another watch.

On one occasion my companions captured three, while the party on the other side of the island lost two, the big creatures taking them to the water's edge, then breaking away. The captives were so large that the boys were obliged to make two trips the next day to bring them over to the fort, where they were placed in the moat until needed for the table.

After the "turning" we would complete our onslaught by robbing the nest. In dire distress we could make use of the eggs, but not otherwise.

I remember during my first experience in housekeeping on the island, when eggs by their scarcity were a very great luxury, one of the negroes came in one day and asked me if I would like some turtle eggs.

"Are they good to eat?" I asked.

"Oh, yes, Missis; we makes great count of 'em at de mess hall, and dey makes firs' rate puddin'. Aunt Eliza knows how to make it," replied the boy.

"Well," I said, "bring me some to-morrow and I will try them."

The next morning he came up the walk with a bag looking like a bag of potatoes, slung over his shoulder, and seeing me in the hall, came in. With a lurch of his shoulders he swung the bag down on the floor with a thud, remarking as he did so: "Dere is yo' turtle eggs, Missis."

"What!" I exclaimed, "in that bag? they must be all broken."

He laughed, saying, "Oh, no, I guess yo' don' know what kin' er eggs them be. Yo' kin fro 'em ober de house an' dey won't break; dey's tough like leather, yo' must tear de skin fo'-it will break."

And then he opened his bag in which was a pile of soft white eggs that would not require a Columbus to stand them upon end or side as they were perfectly round, with a little indentation as though they were not quite full and, consequently, would remain in any position you placed them.

I told Henry to take them through to the kitchen to Aunt Eliza, who was delighted, for there was nearly half a bushel of them, and the colored people were very fond of them. She probably surmised that they would mostly fall to her, and I presume visions of hot supper for herself, Jack and their friends passed quickly through her mind.

My attempt at a pudding was amusing. I had to take the skin — one could hardly call it a shell — of the turtle egg and tear it apart. The contents looked not unlike the egg of a fowl, but the beating was literal and a great deal of it required before the tough matter was reduced to anything like a thin liquid. The milk and spice were then added, and it was baked as a properly prepared custard should be. We concluded, however, that we should give up desserts altogether if we were reduced to turtle eggs; so the people in the kitchen feasted for a week until the bag of eggs was exhausted.

The little turtles when first hatched were the prettiest creatures imagin-

able, so small they would hardly cover the palm of one's hand, and no matter where they were put they would turn and make a straight line for the water.

On the 18th of May, 1862, Captain McFarland was placed in command of the engineer works at Key West and Tortugas that had been in charge of assistants after the departure of Captain Morton. He resided in Key West, making occasional visits to Fort Jefferson.

The men were drilled every day, both in the casemates and on parade, and those from New Hampshire hills were already becoming very soldierly-looking men.

On the 21st a steamer came in with recruits for Fort Pickens, bringing news of the evacuation of Norfolk and the sinking of the *Merrimac*. The *Rhode Island*, which was part of the time our supply ship, was always a welcome visitor, but her range was now from Galvaston to Key West and her calls became less frequent.

On the 14th of June, 1862, a tug came from Key West with an order for the troops to be ready to embark on the morning of the 17th for Hilton Head; it also brought news of the taking of Memphis.

Those three days were sad ones, for with them left Mrs. A—— and Mrs. Colonel L—— with whom we had enjoyed so much. On the morning of the 17th all the ladies were on the piazza at headquarters to see the regiment leave. The Colonel marched them around parade, and as they passed the quarters they saluted us, and then filed down through the sally-port to the tune of "The Girl I Left Behind Me." Company M of the regulars was firing a salute in the casemates, and altogether it was a sad and impressive sight. There were old men, gray and wrinkled, who looked too feeble to march even with only the weight of their knapsacks, while others were in the full vigor of youth, eager for the field. The two departing ladies stood with us, sad-eyed and sad-hearted, for the regiment was going into battle, and the enjoyment of the past few weeks made a very bright background to the uncertainty they saw looming up before them. Even the workmen had asked permission to suspend work, and had assembled on the ramparts above the sally-port, where they gave three cheers for Company M, followed by three for Colonel Putnam and Colonel Abbott. As we accompanied the ladies on board, regretfully saying good-bye, we realized something of the horrors of war which we had not before. We had become attached to the departing men; had watched them as they were transformed into noble-looking soldiers, and appreciated their strength and worth.

The night before they left we had a severe squall that tore the flag over the sally-port literally into shreds. Colonel Putnam, with a possible premonition of his fate, remarked to a lady on whom he was calling, that if he were at all superstitious he should consider it a bad omen. Key West was left almost as lonely as we were, for they took three regiments and three companies from there. Col. Tinelle, with the New York 90th, came in the place of the New Hampshire regiment. Six companies were left in Key West, the remaining four coming to us. It was some time before we became accustomed to the loss of our lady friends, with whom we had been so happy, getting all the pleasure we could out of our limited resources. For example, one day Mr. P——, the engineer, asked Mrs. A—— if she would take a ride. She replied: "Yes, but where is your carriage?"

"Be at the door and I will bring it around," he answered. Soon after he appeared with a tip-cart and the finest mule the department owned. He had put in the cart a chair, over which he had thrown an army blanket. Spreading another over the bottom of the cart, and standing up as did the charioteers in olden time, he drove

Mrs. A—— and Mrs. L—— across parade, picked up Mrs. R——, my sister and myself, and started on, to the amusement of every one. The mule had become enthused by the frolic, so that it needed nothing but guiding, and the velocity with which we were taken twice around the inside of the fort would have astonished Gilpin himself. Then we were landed at our door, where the dignified doctor, who loved fun as well as any one, could not resist pulling out the pin and dumping us into the sand, as the cart was unloaded of its bricks for the workmen, amid the shouts of those who had rushed out to see the novel sight of ladies riding in a tip-cart.

We were all invited by Colonel Tinelle and the officers to dine with them on the 4th of July, and a very pleasant affair it proved. After dinner we adjourned to the piazza and heard the Colonel deliver a patriotic speech to the soldiers, who were drawn up in line before headquarters. Then we went home for an hour or so, returning for a hop, at which there were present twenty gentlemen and eight ladies. The latter were scattered about so as to look as numerous as possible, and as we had all put on evening dress, some one said they might be deluded into the belief that it was another party. At supper the Colonel called us to order, as he wished to propose that if agreeable, we should celebrate the 4th of July every month.

The history of Colonel Tinelle, which he gave me some time after, was most interesting. He was an exiled Austrian veteran, taken prisoner before Charles Albert ascended the throne, and confined three years and six months, I think, under a death penalty. But when the King died, his son Charles Albert commuted the sentence to banishment with nine other prisoners. Colonel Tinelle came to America, his family preferring to remain in Austria, where they held a high position.

After some years, his sentence was revoked, but his wife advised him not to return, as his position would be unpleasant, and also declined following his fortunes in America, upon which the Colonel showed the communication to the Senate of New York, and was granted a divorce. Some time after, he married an American lady, and was sent as Consul to Oporto, where he resided for fourteen years, his wife dying there, and by a singular turn in the wheel of fortune, Charles Albert died there in his arms. He was in the war in Italy with Napoleon III, who was then a lieutenant They were both together in New York, intimate friends, and corresponded until Napoleon became Emperor; but Colonel Tinelle could not forgive his renunciation of Republicanism. While in Italy, he met his eldest son, who, by the death of his grandfather, had inherited the fortune that should have been his. Later he was appointed Consul to Palermo, but our war came on, and he said it made his old sluggish blood tingle, and he gave the position up to some one who wanted to go abroad, and joined our army with his two sons. He was a kind-hearted gentleman of the old school, and the story of his life was as interesting as any historical novel.

Most of the drilling of the preliminary tactics was on the parade in front of our house, and it afforded us not a little entertainment and oftentimes amusement; we even became familiar with the faces of many of the men. One company of the New Hampshire regiment we privately dubbed the "Veterans." One man was so intractable that he was taken out alone by a soldier for private coaching, and all the morning we could hear, "hep," "hep," which name we finally gave him.

One morning the Colonel was sitting on the piazza with us during this daily drill, and turning to my husband, he said: "I shall leave that man with you when we go away. It is no use; he must be a very old fellow." He

looked at that distance like an old man, well preserved, with black hair.

While my husband was in charge, during Dr. Hoffman's visit to Key West, a forlorn looking old man came to him one day for something, and while he was talking, it gradually dawned upon us that it was "Hep," in his natural colors. The idea that any amount of artificial make-up and dye could have deceived a recruiting officer into thinking he had even a claim to middle age was preposterous. The necessity of appearing young had fled with the departure of the regiment and the thought of that poor old man going through the torture of "hep," "hep," and "double quick," morning after morning, was not so amusing as it had seemed at the time. He was evidently renewing his youth by being able to act himself; but in the cause of his country, I think the name of martyr would be all he could lay claim to. We gave him soups and good things daily from our own kitchen until my sister thought he might, if taken then, learn to "thrust," "parry," "leap to the rear," drills we watched so often when the poor old man was trying so hard to be a soldier.

One day we were watching a company being drilled by a young second lieutenant, who had just joined the service. He marched them straight up to the house as though they were going to storm it. They reached the fence only four feet from the steps and there kept stepping, the young officer in torture, as he could not remember the command that would wheel them about, while we tried to look as though it was part of the discipline for them to stand there knocking their toes against our paling. My husband wanted to help him out, but scarcely dared to whisper the order, and I think some discipline would have gone to the winds, and we, as well as the soldiers, would have laughed outright, had not a sergeant in a low tone whispered the order to the distracted lieutenant, who gave the right command.

(*To be Continued.*)

THE NEW STAR OF 1892

BY EDWARD S. HOLDEN, LL. D.

Director of the Lick Observatory

WHEN any new or startling event takes place in the heavens, the interests of the general public and of the working astronomer are temporarily opposed to each other. The astronomer's only desire is to obtain as many trustworthy observations as possible in order that, *by and by*, he may be able to make them known either as affording a complete explanation of the phenomenon, or at least as throwing some light upon it; while the interest of the public is to have that light and that explanation *at once*. The observations of the transit of *Venus* were over on the even of December 9, 1874, and the very natural inquiry of the reader of the newspaper on the next morning was "Well, the transit is over; what is the value of the solar parallax?" As a matter of fact the answer to this question has only been published during the past year. During the whole of the intermediate time a staff of computers have been working over the data given by the observations, and have but just reached the definitive result.

I have never appreciated the temporary conflict of interests just referred to more vividly than now, when the editor of the *Californian* has asked me to write some account of the new star which has just appeared in the constellation *Auriga*.*

It has been under observation at the Lick Observatory for three nights only at the time of writing this, and while certain very definite conclusions could be and would be drawn from our work up to the present time, if the star should suddenly vanish tonight, yet we intend to wait for many more observations before announcing results, although we can now see certain very interesting differences between the development of this star and the records of the development of former ones of its class. I shall therefore be obliged to content myself with giving a very brief sketch of the history of some of these former stars, and an account of the kind of observations now in progress at Mt. Hamilton and elsewhere.

The accompanying map of the region of the sky near *Nova Aurigæ* will serve to point out the situation of the new star (which will be about ten degrees south of the zenith, and on the meridian about quarter before seven P. M. on March first.)

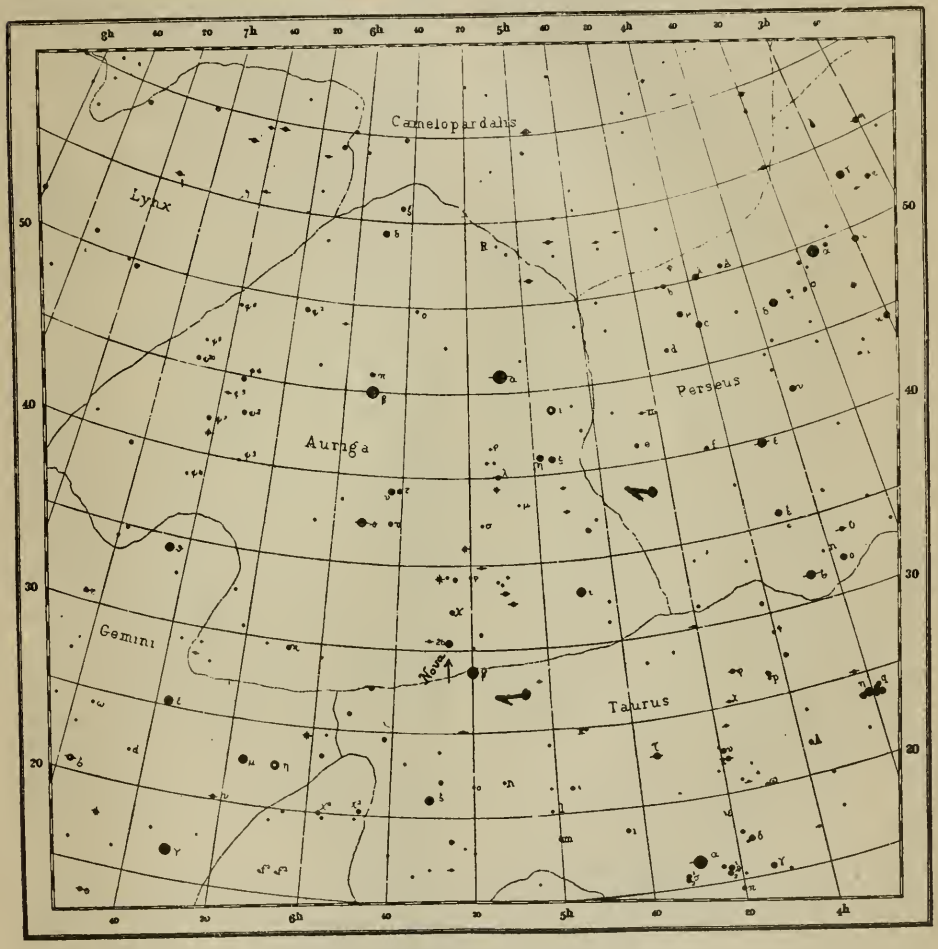
The brightest stars of the map are of the first and second magnitude; the faintest are of the sixth, and are just visible to the naked eye. The *Nova* is (now) about two and a half times as bright as the faintest stars easily visible to the naked eye. To find the star, the reader should first identify the brightest stars of the map, and by means of them, he can orient the map properly. The fainter stars can then be located, and finally the new star.

By a "new" star is meant one which has not before been known, and which is now so bright that it surely would have been included in former catalogues of stars had it always been of its present brightness. This distinction is necessary, for it is impossible to look into the large telescope at Mt. Hamilton without seeing *many* stars which are "new" in the sense that they have never been seen through other telescopes on account of their faintness. In 1843 a complete list of all the stars in the northern hemisphere visible to the naked eye

*Right-Ascension, 5 hours 24.9 minutes; declination, *north*. 30° 23′.

was made by Argelander, and there is *no* star in the place of *Nova Aurigæ*.

Moreover a complete list of every star of the northern sky visible in a small telescope of about two inches aperture (including *all* stars down to the 10th magnitude) was published in 1859 the by observatory of Bonn. This *Durchmusterung* contains some 300,000 stars, but there is no star in the place where this new one now is. The recent photographic charts made at Harvard College observatory show no star (I believe) in the situation of this *Nova*. Therefore we may say that the *Nova*, which is now of the fifth magnitude and easily visible to the naked eye is certainly *new* as a fifth magnitude star, and it deserves the name, even if we refer only to stars as faint as the tenth magnitude or fainter. *Some* star, *some* nebula, *some* mass of matter there must have been in its present situation. This mass may formerly have been self-luminous—a star or nebula therefore—but so very faint as to have escaped the enumeration of the *Durchmusterung*, etc.; or it may not have been self-luminous at all; it may simply have been a mass of matter capable of reflecting light, but not of emitting it:



Map showing Situation of the new Star Nova.

a *dark star*, in short, like our own earth, for example. We know that such bodies do exist in the heavens, and in spite of the fact that they are invisible, we know quite a good deal of their motions and even of their masses. This is, however, "another story," and the fact is cited here simply to show that there are analogies to support the supposition that this *new* star may have been, only a few weeks ago, merely a dark mass of matter quietly pursuing its regular path in space, and apparently destined to remain forever unknown to inquisitive mankind.

Some tremendous event in the history of this mass of matter has lately occurred by which it has suddenly been turned from a dark body into a very brilliant one. Let us suppose, for example, that it formerly was a real normal star of the 14th magnitude. It would not have been catalogued in any of the charts we now possess. Such a star (14th magnitude) is about the *minimum visibile* of a telescope of nine inches in aperture. It may have been *seen* by quite a number of observers using telescopes of nine inches in aperture and upwards; but it would not have called for any special remark and notice among the thousands of similar objects of the same class. It suddenly has increased in brightness from the 14th magnitude (let us say) to the fifth; that is it has increased in brilliancy something like 3,300-fold at the very least! From one of the most insignificent objects, only to be detected in a powerful telescope, it has suddenly taken its place among the lucid stars.

There are millions and millions of stars as bright as the 14th magnitude; there are only a few thousands visible to the naked eye.

We do not know the efficient cause of this mighty change. We can obtain a rough conception of it if we recollect that the chief difference between two objects so utterly dissimilar as the sun and the earth is one of temperature. If the earth were suddenly to be raised to the temperature of the sun, the spectra of the two bodies would be very much alike, and an observer distant from both of them would then regard them as objects of the same class though of very different sizes. It may assist us in comprehending the phenomena presented by new or temporary stars to read a few paragraphs from Miss Agnes Clerke's admirable work, "The System of the Stars (1890)" as follows:

"The brightest sidereal object known to us by authentic description was the "stranger star" in Cassiopeia, observed by Tycho Brahe. He first saw it Nov. 11, 1572, but it had already been noticed by Lindauer at Winterthur, November 7th, and Marolycus entered upon its systematic study at Messina, November 8th. From equality with Jupiter it rose in a few days to be the rival of Venus, showing to keen eyes at midday, and at night through clouds thick enough to obscure every other star. After about three weeks, however, it began to fade and in March 1574 disappeared finally. Its color was at first dazzling white, then for a while ruddy, and from May 1573 onward, pale with a livid cast. Rapid scintillation distinguished it throughout. There is no reason to suppose its outburst other than solitary. The appearances in the years 945 and 1264 connected with it by a Bohemian astrologer named Cyprian Leowitz, were almost certainly apocrypal.

The "new" star (designated 'B Casseopeia') can still be perceived smoldering in the spot where it once blazed. Tycho's measurements, reduced and discussed by Argelander, located it within one minute of arc of a reddish, eleventh-magnitude star, first noticed by d'Arrest in 1865, the character of which, as disclosed by the observations of Hind and Plummer in 1870–74, fully warrants the inference of its identity with the famous 'temporary.' Not only is it variable to the extent of nearly a magnitude,

but it frequently seems nebulous, with occasional lurid flashes of momentarily increased brightness. Its non-appearance in the photograph taken by Mr. Roberts January 12, 1890, showing above 400 stars where d'Arrest charted 212, may be due to the actinic feebleness of its light.

With the spectroscopic study of temporary stars, a fresh chapter in our knowledge of them opened. Through the magic of the prism, more was ascertained as to their essential nature in five minutes than could have been learned in as many centuries with the telescope alone. On May 12, 1866, Mr. John Birmingham, of Millbrook, near Tuam in Ireland, was amazed to perceive an unfamiliar star of the second magnitude shining in the constellation of the Northern Crown. On May 16, the application of Dr. Huggin's spectroscope showed the object to be wrapped in a mantle of blazing hydrogen. Five bright lines (three of them due to hydrogen) stood out from a range of continuous light broken up into zones by flutings of strong absorption. The incandescence of a star was hence largely atmospheric and for the rest, from the rapid rate at which it fell away, could have been only 'skin-deep.' That the compound nature of its spectrum testified truly to an immense diffusion of vaporous material in its neighborhood was certified by Dr. Huggin's visual observation of a singular glow round the star on May 16 and 17. Athough its light decreased by a daily half-magnitude, and its color changed from white to orange, no alteration took place in the character of the spectrum. The bright rays, however, faded somewhat less promptly than the continuous light.

The visibility of the object to the naked eye lasted only eight days, and already, in the beginning of June, it had sunk to the ninth magnitude. Its slow subsequent decline was interrupted by fluctuations, thought by Schmidt to be periodical in about ninety-four days. When observed by Vogel, March 28, 1878, it was of the tenth magnitude, and gave me an ordinary stellar spectrum. Virtually, it had resumed the conditions of its existence when Schönfeld entered it as of 9.5 magnitude in the 'Bonn *Durchmusterung*.' Its leap upward to the second magnitude, involving a *thousand fold* gain of light, was accomplished with extraordinary suddenness. Two hours and a half previously to Birmingham's discovery, Schmidt surveyed at Athens the constellation in which the blaze was about to occur, and noticed nothing unusual. He was certain that the star could not have been as bright as the fifth magnitude.

The name of 'T. Coronae' was bestowed upon it in conformity with Argelander's system of nomenclature, by which the variables in each constellation are designated, in order of their discovery, by the Roman capital letters from R onward. Only stars otherwise anonymous, however, are included in the distinctive series thus created, so that many variables are still entitled in the ordinary way by Greek letters.

The stellar apparition that ensued after ten years was, in some features, the most remarkable of all. Dr. Schmidt noticed at Athens, November 24, 1876, a star of the third magnitude near P Cygni, in a spot till then vacant so far as recorded observations went. The weather having been cloudy during the previous four days, there was no possibility of tracing the steps of its ascent, but it ran down very rapidly, and ceased to be visible to the naked eye on December 15th. Its changes of color pursued an inverse order to those of its predecessors. From golden yellow it turned white, and eventually bluish."

The history of such objects is always something like the foregoing. It will be evident that the question of the interpretation of the spectroscopic observations of such stars is quite too technical to be entered upon here, involving as it does a discussion of the

unsettled problem of the relation of the age of a star to the nature of its spectrum and the equally unsettled question of the cause of variability in stellar light, etc. It will be best, in this hasty account, to leave all such matters to one side with the remark that the experts are by no means agreed upon them, and that the general answer to the inquiry "what then *is* the cause of such phenomena as variable and new stars present?" must be, at present, "we do not know." The subject is a new and most difficult one. It is impossible to experiment in our laboratories on matter in such conditions of temperature, etc., and observers are obliged to record the phenomena as they present themselves, and to painfully piece together the significant facts towards constructing a satisfactory explanation in the future.

There is no reason to doubt that such an explanation can be and will be reached in time.

Perhaps the most generally interesting proceeding will be to give an idea of the nature of the observations which are now in progress at Mount Hamilton with the object of accumulating sufficient and adequate data for future discussion. In the first place the new star *may* disappear, therefore photographs of the star with other surrounding stars have been taken, so as to fix its place in the sky, and its position has likewise been determined by visual observations. We now know where the star was in the sky in the early part of February, 1892, and if it changes its situation (which is not likely) future observations will decide how much it has changed. The star *may* be near enough to us to be subject to those very small, periodic, annual changes which mark a sensible parallax. To settle this question photographs of its neighborhood will be taken with the great telescope on the first available night which is not windy. There is no doubt that the *Nova* will vary in brightness.

To register its variations in brilliancy, comparisons of its light with that of a neighboring star of about the same magnitude are made by the naked eye, and photographs are regularly taken every few hours which give its brilliancy in terms of the light of the pole-star taken as a standard. These photographs reduced by methods which have been devised at Mt. Hamilton will give a perfect account of the light variations of the *Nova*, and they will be continued throughout the significant portions of its history.

Variations in its brightness will undoubtedly be accompanied by variations in the character of its spectrum. The visible portions of the spectrum have been (and will be) studied with the spectroscopes of the 12-inch and of the 36-inch telescopes.

These visual observations are made at Mt. Hamilton, under very favorable conditions, and it is likely that they will be as valuable as any which can be secured. The portion of the spectrum which is not easily *visible* (to the eye) has been regularly photographed also, with excellent results.

On February 8th, 9th and 10th, the visual and photographic spectroscopic observations combined have fixed the places of some 50 different bright lines and bands. The place (wave-length) of each of these has a physical meaning and will be of importance in deciding upon the chemical constitution of the star; and the changes in this spectrum will throw light upon the nature of the physical and chemical changes which are taking place within its atmosphere. The motion of the star towards or from the earth (if it is in any way considerable) can also be deduced from such observations.

The foregoing short account will give some idea of the processes by which it is sought to gain the data, which are desired from this very remarkable appearance. I am extremely glad to say that the Observatory now possesses nearly all the instruments and apparatus which are

needed for this research. If the star had appeared a couple of years ago, we should not have been ready; and I do not think I can very well convey a conception of the pressing need we now feel for two or three small additions, costing in all less than a thousand dollars, which would help us amazingly, if we only had them, but which we cannot now afford. There is a rough piece of glass in Pittsburg (I believe it is the only one now in the United States) that would be of the greatest use to us now, if it were only made into a prism really suitable for photographing this spectrum, and there is a mate to it in Europe waiting for us to obtain the few hundred dollars necessary to buy and fit it for the same use; and there are a few pieces of brass work waiting to be done and paid for with money that we have not got. When our needs of this kind (and they are not large) are really known, I feel sure that they will be provided for, and I speak of them now, because it is in cases of this exceptional kind that we feel them most sharply.

But our present facilities are ample for us to obtain excellent and valuable results, and it will be, I hope, evident that we are not neglecting our opportunities. I think that we shall certainly be able to give a good account of this few star at the end of its apparition.

Lick Observatory.

JOHN G. WHITTIER

BY ELIZABETH GRINNELL

Dear human mountain peak serene and high
Above the snow-line of the height of years;
We, on the lowlands at thy feet look up and sigh
Lest, growing whiter still, and piercing yet the sky
Thy form be lost through falling mists of tears.

Pasadena, Cal.

THE LABOR QUESTION OF THE PACIFIC COAST.

By John Bonner.

IN March last Mr. Samuel Gompers, the head of the American Federation of Labor, visited the Pacific Coast; on his return he reported that labor was better organized there than anywhere in the Eastern States. There are reasons why this should be so. The labor movement on the Pacific started from a vantage ground which Eastern organizers of labor did not enjoy. From the first the latter had to contend against a long-established system of low wages and long hours of labor. On the Pacific the workman had to deal with a market in which the price of labor was inflated. All that he had to accomplish was to prevent a too rapid decline in wages caused by an influx of competitors from outside. The Atlantic Coast workman had to raise wages and diminish the hours of labor in the face of constant and copious immigration from Europe which he could not stop; the Pacific Coast workman's task presented no such formidable obstacles.

Until the exhaustion of the mines on the Comstock, labor in California always commanded three or four times the wages it was worth at the East. But when that event occurred a change took place. From 1878 to 1881 California was about the worst place in the United States for a mechanic to try to make a living. These were years of general prosperity in the Eastern States, the depression of 1877 having been followed by an absolute boom in business. But on the Pacific Coast all was gloom. A new constitution, which was proletarian in its main features, was adopted in 1879, and the raids on property which it attempted to license frightened capital out of the State. A political party with agrarian purposes had arisen, under the name of the Workingmen's Party, and seemed to aim at a policy of confiscation. For the time it arrested development. The mines had ceased to produce. The railroad stopped work on its extensions. Building was checked. Enterprise was paralyzed. And the natural consequence followed in a cessation of the demand for labor.

But it is the happy fate of California to be rich in resources, so that when one fails others rise to take its place. It was discovered that, though the Comstock and the placers were practically no more, the State was a producer of wheat, wine, wool, fruit and oil. A number of unemployed men drifted into the rural counties, and got work on farms. Others migrated north and found employment in the forests which clothe the banks of the archipelago of Washington. Others moved south into Arizona, where a great railroad was in course of construction, and got work in tracklaying or mining or cattle-herding. Some returned to the East. By degrees the surfeit of labor in San Francisco was thus relieved, and early in the eighties equilibrium was restored. First timidly, then confidently, workmen began to demand the old wages, and after a time employers acceded to their demands. Then the labor element proposed to intrench its position by organization.

At that time several unions were already in operation. The San Francisco Typographical Union was organized in 1872. The Brotherhood of Locomotive Engineers had a branch on the Coast as soon as the Pacific railroad came in. Early in the sixties a Miners' Union was established in Nevada with branches in California. In 1867 the Ironmolders' Union was established; it was reorganized in 1878. The Journeymen Tailors formed their union in 1873. The Barbers'

Union dates from January, 1878. It was in the same year that the unions of the Boiler-makers, the Iron Shipbuilders, and the Caulkers were founded. The Draymen and Teamsters established their union in 1876. The Gas-blowers' Union was formed in 1877. The Plasterers had formed a union in 1865, and the Shipwrights in 1868. A number of other organizations of labor were formed after 1880, some of which survive to this day.

It is difficult to keep count of the labor organizations of California. As a rule, the formation of unions, like their by-laws, is kept a secret. Some unions appear to have been dissolved very shortly after their formation; others to have consolidated with cognate organizations. Early in 1886 some of the more active unions banded themselves together and formed a Council of Federated Trades, in which every regularly constituted union had a right to be represented by delegates. Unlike the corresponding institution in Australia, the Council of Federated Trades does not seem to have the power to order a general strike; but it may order a boycot of employers who fall under its ban, and it may call upon the unions represented in the Council to contribute money to support the members of a union which is on strike. The reports of the strength of the Federated Trades Council at different periods vary widely. On April 12, 1886, a committee of the body certified in writing to Governor Stoneman that it represented "fifty-four independent organizations." Later in the same year the Commissioner of Labor, who had access to the official records, reported that there were thirty unions which sent delegates to the Federated Council. On November 1, 1887, a published report made by the officers of the Federated Trades gave the number of unions represented in their body as twenty-one. On October 1, 1888, the Commissioner of Labor reported that, out of eighty-one trades unions in San Francisco, seventeen only were represented in the Council. In July, 1891, the outgoing President of the Federated Trades stated in his annual report that twenty-two unions had joined the Council during the year; and it has been alleged on semi-official authority that the total number of unions represented at the time he made this statement was thirty-seven.

It is evident that the organization is loose; that unions are born, and die unperceived; that some of them join the Federated Trades, and then secede for reasons of their own; and that, in view of the reluctance of the officials of labor unions to furnish information to the public, any estimate of their strength must rest chiefly on guess-work. It is supposed by those who watch labor movements closely that there are some sixty labor unions in San Francisco at present, with an average membership of about eighty each; but this is mere conjecture. This is independent of mutual benefit societies, building and loan associations, endowment associations, and fraternal societies.

Among the trades which have unions, besides those enumerated above, may be mentioned the Bakers, Brewers, Brakemen, Boot and Shoe Makers, Bookbinders, Butchers, Bricklayers, Confectioners, Cigar-makers, Coopers, Candy-makers, Carpenters, Coast Seamen, Furniture-makers, Cooks and Waiters, Harness-makers, Horseshoers, Longshoremen, Musicians, Painters, Pattern-makers, Plumbers, Pressmen, Paviors, Stevedores, Firemen, Teamsters and Woodcarvers. Each of the unions has a set of rules, prescribing the conditions under which members may work for employers, and the wages they must demand. In some of the unions, the rules as to pay are minute and elaborate. The Tailors' Union, for instance, sets a special price on every job of work from sewing a straight seam to finishing a buttonhole; and the merchant tailor is compelled to comply. There are in every trade a few mechanics who do not belong to the unions, and who are called "scabs;" but they do not constitute a force

sufficient to enable an employer to rely upon them to man his shop. He must perforce employ union men, and submit to their rules.

How well the unions have succeeded in maintaining the price of labor on the Pacific Coast, the following extract from a table which was lately compiled by ex-Commissioner of Labor Tobin will show (Report of 1887–88, page 147):

WEEKLY WAGES IN VARIOUS COUNTRIES.

Occupation.	California.	New York.	Illinois.	Germany.	France.	Italy.	England.	Ireland.
Bricklayers	$30.00	$20.00	$24.00	$4.21	$5.74	$4.20	$7.56	$7.22
Carpenters	21.00	14.00	16.50	4.11	6.20	4.00	7.66	6.97
Masons	30.00	18.00	24.00	4.07	5.33	3.60	7.68	7.47
Plasterers	30.00	18.00	27.00	4.43	6.34	5.04	7.80	7.12
Bakers	18.00	7.00	12.00	3.90	5.48	4.00	6.17	6.53
Blacksmiths	21.00	13.00	15.00	4.00	5.81	3.60	7.37	7.07
Draymen	15.00	10.00	12.00	2.96	5.57	1.50	5.37	4.26
Printers	20.00	13.00	. . .	. . .	6.64	4.60	7.17	8.52
Stevedores	24.00	12.00	18.00	5.70	6.72	2.00	8.44	5.40
Tailors	18.00	12.00	15.00	4.00	5.18	2.20	6.38	5.45

The discrepancy between the market value of skilled labor in California and its value elsewhere might be accounted for if the cost of living were higher in the Pacific than in the Atlantic States. But in fact it is less. Food of all kinds is abundant and cheap; the mildness of the climate minimizes a workman's expenditure for clothing and fuel; rents are, perhaps, higher in San Francisco than in the suburbs of Chicago and New York, and dry goods and manufactured goods, which the resident of the Pacific Coast must get from the East, are dearer. But every other necessary of life can be obtained for less money in San Francisco than in New York.

One is lost in admiration of the ingenuity with which, under these circumstances, the labor organizations of the Pacific Coast have defeated the operation of natural laws, and maintained wages at double or treble the Eastern or European level. It is one of the most astonishing incidents in the history of industry,—one of the most brilliant triumphs that organized labor ever won. The monopoly was established in the teeth of difficulties which must, at the outset, have appeared insurmountable.

When the labor unions undertook to establish that monopoly, and to prevent competition in the market which they intended to reserve for their own members, they had to guard against three risks: an influx of labor from the Eastern States, a flood of labor from China, and a fresh supply of labor from natural increase among themselves. It seemed inevitable that Eastern mechanics would flock in droves to a State where wages were double what they were getting, and the conditions of life more agreeable; that of the four hundred millions of Chinamen who inhabit a country where raw labor is a drug at fifteen cents a day, some at least would come to better themselves on the east coast of the Pacific; and finally that, in time, the sons of the members of the unions would grow up, would compete with their fathers for work, and would eventually break down the monopoly. These three dangers the unions clearly discerned. They provided against them with a skill which seems marvelous. The details are replete with dramatic interest.

The Eastern door of the California labor market was, in the first place, barricaded with literature. The Pacific Coast unions made it their business

to saturate the East with letters and articles going to show that California was no place for a working man. Every union in the Atlantic States was supplied with accounts of the suffering of unemployed men in San Francisco in the winter of 1878, and was left to infer that the situation was unchanged. At times articles were inserted in friendly papers on the Coast, abounding in the same sense; these were scattered through the labor centers in the Eastern States with such assiduity that it became an adage at Pittsburg and New York and Boston, —"Whatever you do, don't go to California." The prevalence of this opinion, coupled with the cost of a journey to a remote and unknown country, indisposed most workmen to cross the Rocky Mountains. If there were any who were not to be frightened away, or who knew the real facts, they were subjected to other treatment. They learned on arrival that they must belong to a union in order to get work.

In most trades a union man will not work by the side of a non-union man, or "scab." When newcomers applied for admission to a union, their case was considered from the point of view of their numbers. If there were but one or two of them, and no more seemed likely to follow, they were admitted on payment of the usual inauguration fee. But if there were a number of them, or if they seemed likely to be the pioneers of a migration, they were quietly told that there was no room for them on the Pacific Slope; that they had better return whence they came,—at the cost of the unions if they were "broke." In these cases strangers found it impossible to gain admission to the unions, and impossible to get work without admission. Stories are current of savage assaults on Eastern mechanics who moved to the Coast, and persisted in remaining there contrary to the advice of the unions. The methods which Charles Reade abolished in England by describing them are not unknown on the golden shores of the Pacific. The lot of an Eastern mechanic who comes to San Francisco and tries to get work here in spite of the unions has lurid aspects.

Eastern mechanics being barred out, the Chinese remained to be handled, and they had to be dealt with differently. Chinamen began to arrive in California in the placer days, and for twenty years they worked side by side with white men with little friction. In 1868 a grand banquet was given in San Francisco to the Chinese merchants; the Governor of the State was present, and delivered a speech in which he welcomed the Orientals to California. Chinamen marched in Fourth of July processions, carrying dragon flags. A few members of races which had in their day been victims of persecution and ostracism railed at the Heathen Chinee; but people generally were quite willing to give the stranger a fair chance. This went on until dullness crept over the labor market, when it occurred to the labor unions that if, by appealing to race and religious prejudice, the Chinese could be driven out, it would be an easy and effective way of getting rid of competitors who might become unpleasantly numerous. Californians are like other people; the instinct to 'eave 'alf a brick at a man because he is a stranger is as strong among them as in other races. So when Dennis Kearney got upon a bench on the sandlot, and proclaimed that "the Chinese must go," the audience applauded; and at the close of the fervid oratory of the Pacific Coast Demosthenes many a man bought himself a piece of rope to hang Chinamen with.

Why not? They had no friends. They had no votes. They did not wear American clothes nor speak the American tongue. It was agreed on all hands that their testimony on oath was unreliable. White juries paid no more attention to it when it was contradicted by the evidence of a white man than a jury of Southern gentlemen paid to negro testimony before

the war. They were an eminently safe object of persecution; the most timid editor and the most double-faced politician could rail at them with no fear of consequences. Persons outside of the labor unions did not care whether they went or stayed; but the unions were keenly alive to the gain they would derive from their exclusion.

It seems strange that, in the hope of securing the electoral vote of California, both parties should have been willing to pass an Act which acknowledges the inability of men of our race to contend against the Chinese on equal terms, and that the broad admission should have been made that the Anglo-Saxon and the Celt and the Teuton cannot hold their own against a semi-barbarous race, which is incapable of acquiring any of the higher branches of knowledge, and can never master a craft requiring anything beyond manual dexterity and the merest rudiments of reasoning. The Exclusion Act had not even the poor excuse of being a measure of protection to American labor against the pauper labor of Asia. Chinese cheap labor has always been a myth. The Chinese know the value of labor as well as any race, and exact the uttermost farthing for their services. In the orchards and vineyards of Southern California they are more serviceable workmen than the Whites, being better able to stand the climate, and they ask and get as good or better pay. Of the 65,000 Chinamen now in California, some 20,000 live in San Francisco, and are chiefly engaged in domestic service. A competent Chinese cook gets $35 or $45 a month, and makes half as much more by the percentage he receives on the house supplies he purchases, the perquisite being no secret, but a matter understood all round. The "second boy," who corresponds to the housemaid of the East, and makes beds, sweeps rooms, waits on table and answers the doorbell, gets $25. Both are boarded and lodged; and, though the Chinese are supposed to live upon rice, the Chinese servants in San Francisco expect hot meat twice a day, and have a pretty taste in pork chops and wings of duck.

For all this the unions insisted on the Exclusion Act; and, no one—except a few men of principle—caring to oppose them, it took its place on the statute book, and organized labor on the Pacific Coast was barricaded against competition from the West as well as the East.

The only remaining peril was from the growing generation,—the sons of members of the unions. If they grew up and learned their fathers' trades, the monopoly would sooner or later be seriously menaced. To maintain wages effectively, the young men must be barred out, like the Eastern mechanics and the Chinese. The son must go hungry in order that the father should feed. How to accomplish this the Miners' Union, one of the oldest organizations on the Coast, had pointed out. Its plan was very simple. It adopted a by-law that the rate of pay for underground men should be $4 per shift, regardless of age, experience or ability; thus, if a superintendent allowed a lad to go into a mine to learn the trade under his father, he was bound to pay him the same wages as the father. The rule had the effect of preventing the miners' sons from learning a trade, and of compelling a large proportion of the young men of Virginia City and other mining camps to grow up without means of support, which involved their drifting into evil courses; it also prevented the working of mines containing low-grade ore, which might have been exploited with labor at $2.50 or $3 a day, but could not afford to be handled with labor at $4. But the by-law fulfilled its purpose. It protected the Miners' Union from the competition of the rising generation.

One of the oldest labor unions in San Francisco, the Ironmolders, was quick to follow the example set by the Miners' Union. It adopted a rule limiting the number of apprentices in any one shop to one for each eight molders and one for the shop. The example

was contagious. The Bag and Satchel Makers' Union refused to allow more than one apprentice to every six journeymen. The Bricklayers restricted the number to two for each employer. The Caulkers set the limit at one to each boss. The Cigar-makers allowed one to each ten journeymen, and one for the shop, but no shop could have more than three in all. The Coopers allowed each member of the union to have one son work under him as apprentice. The Glass-blowers forbade more than one apprentice to every fifteen journeymen. The Hatters would not allow over two apprentices to any shop. The Pattern-makers allowed one to every four journeymen. The Stonecutters set the limit at two to each yard. The Woodcarvers allowed one to every six men, and one for the shop. The printers of morning papers were restricted to one for every fifteen journeymen; printers of evening papers, one to every ten journeymen; printers of weekly newspapers, one to every five journeymen.

The remarkable fact that labor on the Pacific Coast commands twice or three times as much money as it does in the Eastern States or in Europe, while living costs less, may now seem less inexplicable than it at first did to the reader. The machinery which has been described accomplished its work, and defeated the operation of natural laws. It was a wonderful feat,—a victory which reflects credit on the cunning of its authors. The story recalls the record of the ancient European guilds; but, to be sure, under those close corporations, young men often took to the highway because the guilds would not let them earn an honest living.

It is not to be supposed that the despotism which the unions thus succeeded in erecting was established without friction and conflict. Its victims rebelled often and earnestly. From the renaissance of labor in 1883 to the present time strikes and boycots have been of constant occurrence. A glance at one or two of these will illustrate the situation.

In the early months of 1885 the wages of an ironmolder were $3 a day. The men struck for an advance, and on the 8th of June of that year the foundries agreed to pay $3.25. Two years afterward they struck again and were again successful; on August 8, 1887, the wages were raised to $3.50. Encouraged by these victories the union adopted rules modifying the internal economy of the shops, and taking their management, in small details, out of the hands of the owners to place it in the control of the union. Some of these rules, designed to benefit the workmen, reduced the profits of the employers, and handicapped them in their competion with Eastern foundries for supplying castings for buildings and other constructions. In 1889 the oppression of the unions became so unbearable that the foundries formed an association on their side, and agreed to resist the next demand of the union, and to stand by each other. The conflict came, over a trifling detail, in the foundry of Steiger & Kerr. These founders had observed that some of their workmen turned out fifteen and sixteen pieces from one pattern, while one or two others, who were slower workmen, only turned out twelve. They handed a pattern to one of their best men, and to their surprise they found that he also only turned out twelve. They passed the pattern to another, also a first-class molder, and he in like manner only turned out twelve. Struck by the coincidence they inquired the reason, and were told that the union had adopted a rule that, when a pattern was passed from one man to another, the second man shall not exceed the amount made by the first. This was establishing the slowest and most inefficient man's work as the standard for the shop. The founders called their association together, the offending molders were discharged, and a general strike was the result.

The contention of the molders was that their men should be reinstated on the old terms, and the rules of the

union obeyed by the founders in every particular. The contention of the founders was that they would have nothing more to do with the union, nor recognize it in any way. They claimed the right of managing their own business, and of employing whom they pleased, whether union men or non-union men. They declared that thenceforth they would employ as many apprentices as they chose, and would adopt such regulations for the government of their shops as they thought proper. They announced that they contemplated no reductions in wages, but merely intended, as it was their money which was at stake, to control its employment.

The conflict was bitter. The shops were manned with non-union labor, and skilled labor imported from the East; but work was conducted under circumstances of great difficulty. It became necessary to lodge and feed the workmen in the shops; their lives would not have been safe had they walked the streets. Though a large force of police patroled the surroundings of the foundries, at least a score of men were attacked by the strikers and cruelly beaten. To save the life of one of his men, Mr. Kerr was compelled to shoot a striker dead. He was promptly arrested, tried and acquitted. A quantity of iron and steel work which was required in California, and which would have been done in San Francisco but for the strike, had to be sent East. Valentine, the President of the Molders' Union, boasted that the strike had delayed the construction of one of the cruisers, lately built at the Union Iron Works, by several months. In the mean time, about 180 skilled mechanics, many of them with families, lived on one dollar a day for months,– the money being contributed by sympathetic unions. The end, which was obvious from the first, came at the end of twenty months; the strikers surrendered, and the founders won a complete victory.

In this case the issue was not a question of wages or hours of labor; the question involved was whether the unions or the owners should run an industrial enterprise.

Another interesting controversy, in which wages and hours cut no figure, was the conflict between the working shoemakers and the shoe-manufacturers. In the spring of 1885 the Boot and Shoe Makers' White Labor League complained that their members were unable to live in consequence of Chinese competition, and the Labor Bureau was moved to investigate their grievance. It appeared that there were in San Francisco about 1,200 working white shoemakers. The number of Chinese shoemakers it was impossible to ascertain. The league estimated them at a couple of thousand; but the testimony showed that a quarter of that number would have been nearer the mark. As California has always been a producer of hides, it is not surprising to find the annual output of boots and shoes prior to 1885 estimated at $5,000,000. It was shown in the testimony taken at the Labor Bureau that the Chinese cannot make an expensive shoe, or a dress boot, or a lady's shoe, or even a first-class miner's boot. Their product is confined, exclusively, to cheap, coarse shoes, such as laborers and farm-hands wear. Mr. Isaac Hecht of the firm of Buckingham & Hecht, one of the largest manufacturers of boots and shoes on the Coast, testified that there were less than 250 Chinamen employed by white manufacturers in San Francisco, and, so far from their blocking the way for white shoemakers to obtain employment, there had been no time in the past year when a competent white shoemaker could not have obtained work in his shop.

Notwithstanding this, the White Labor League demanded the immediate discharge of all Chinamen employed in White factories, and this being refused ordered its members to strike. The strike was productive of serious and unexpected consequences. San Francisco had been for years the chief source of supply for boot and

shoe dealers, not only in California, but likewise in Arizona, New Mexico, Western Texas, Colorado, Utah, Nevada, Montana, Idaho, Oregon, British Columbia, and the Islands. These dealers, apprised of the strike by telegraph, and apprehensive that it would prevent their orders being filled, duplicated them to manufacturing centers in Massachusetts. The trade on the Coast was demoralized and partially transferred. In 1876 the receipts by rail of boots and shoes at San Francisco from Eastern points were 49,321 cases; and this was about an average before the labor troubles began. In 1886 they were 73,076 cases; and, the trade accommodating itself to the new demands, in 1889 there were 120,594 cases, besides 24,891 cases brought in by sea.

The fight ended in the strikers begging to be taken back. But the industry had received a blow from which it has not yet recovered; and, of course, the journeymen have suffered with the bosses. Unprofitable trade has led to renewed contention, and this has proved so aggravating that one manufacturer named Murr, whose factory occupied four large buildings which he filled with workmen, has removed his plant to Vermont, where, as he says, people will not worry him about the color or the religion of his men. Other manufacturers talk of following his example. Mr. F. S. Chadbourne proposes to leave the State with his plant.

A precisely similar case was that of the Cigar-makers. In this country, the trade of cigar and cigarette making is generally monopolized by Poles and Germans, Hungarians, Russians, Croats and Slavs. Americans rarely take to it. Chinamen do, and become very expert. In the fall of 1885 the "White Cigar-makers' Union" of San Francisco besought the Labor Bureau to investigate the cruel hardships which were inflicted upon their members by Chinese competition. Commissioner Enos viewed the subject from the standpoint of its political possibilities, and proceeded to institute inquiries. He found that San Francisco had been producing some 3,000,000 cigars weekly, which were supplied to every part of the Coast. He denounced the employment of Chinamen in so high and holy a calling, and advised that every cigar hereafter made by gentlemen from Poland and Hungary should bear a label stating that it was the product of white labor. Strange to say this did not increase the consumption of the output of White factories, nor diminish the use of unlabeled cigars. Then the White Labor League offered to replace the Chinamen who were at work in the factories with white men. The manufacturers closed with the offer. But curiously enough the European cigar-makers who were said to be starving in consequence of Chinese competition could not be found. The League then offered to import white men from the East; that also was satisfactory to the manufacturers. Accordingly, some four hundred men were imported by the "White Cigar-makers Union" at considerable expense, and were received on their arrival by a procession with a brass band, and bearing a transparency on which a Polish gentleman with a monstrous foot was depicted in the act of kicking a Chinaman out of the country. Of the four hundred newcomers, two hundred and forty were found incompetent, and were sent back forthwith; of the remainder the bulk were seduced by the attractions of the orange groves and fruit orchards to leave the city, and disappeared from public view. The end was that the members of the White Labor League had to sue for readmission to the shops, even though Chinamen worked beside them.

But it was their destiny to discover simultaneously with the shoemakers that the machine of commerce is delicate, and when thrown out of gear is not easily repaired and set going again. The news that the cigar-making industry of San Francisco had been disorganized by labor disputes soon spread throughout the region which had been in the habit of drawing

its supply of smokables from that point, and dealers began to look elsewhere for stock. Eastern drummers swarmed over the slope from Vancouver to Tucson, and even to El Paso; and when the Hungarian and Polish gentlemen concluded to pocket their pride, and to work in a room which was contaminated by the presence of a Chinaman, they found that the manufacturer had been compelled to curtail his force in consequence of the falling off in his sales. The number of cigars made in California in 1884 was in round figures 151,000,000; in 1889 it had fallen to 133,000,000, a decrease of 12 per cent. The value of the stamps sold by the Government for cigarettes was, in 1881, $12,930; in 1889 it was $1,728. The falling off is heavier than can be explained by the reduction in the internal revenue on tobacco products. In a vain attempt to crush the Chinese the shoemakers and cigar-makers had taken the bread out of their own mouths.

Meanwhile the frequency of strikes, and the gradual encroachments of the unions upon the rights of employers, have induced the latter to organize for self-defense. On August 25th a meeting of representative business men was held in the Board of Trade at San Francisco, and a temporary organization was effected. The meeting was held with closed doors, and none of the speeches have been reported. But it is understood that the policy which the organization proposes to pursue will be defensive, not aggressive.

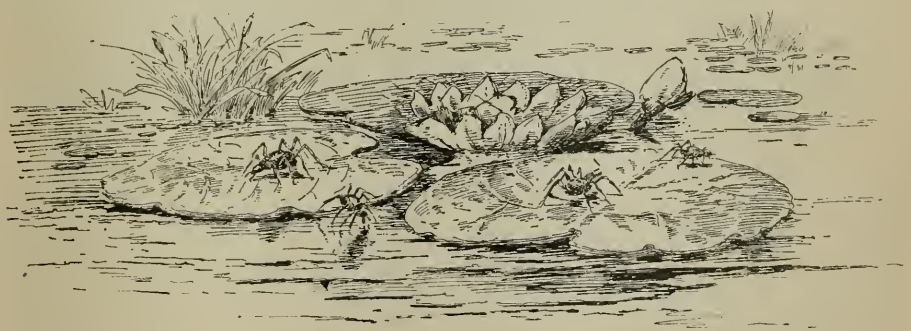
Both employers and workmen will doubtless study the labor strike which began in Australia in August, 1890, and did not end till November. That was a sympathetic strike, the bodies chiefly concerned having no interest in the dispute which caused the strike; and the extent to which it spread arose from the plenary powers intrusted to the Trades and Labor Council, which corresponds to the Council of Federated Trades in San Francisco. The California Council has the power to order a boycot, or a contribution from unions in aid of strikes; but it has no power to call out a union, while the Australian Council has. In Australia the fight began over the discharge of a seaman from a coast steamer. The Federated Seamen's Union took up his case, and failing to obtain satisfaction appealed to the Trades Council, which called out in succession the Seamen, Draymen, Stevedores, Miners, Sheepshearers, and almost every other organized body of workmen. Every kind of business was brought to a standstill. No ship could be loaded, no sheep sheared, no fuel obtained for cooking or for gas, no coal mined, no food moved from place to place. Merchants were seen driving their own drays, with a policeman on each side for protection. A Queen's ship running in for coal had to land her marines to cover the bluejackets who carted the coal to the landing place. At nightfall business stopped, and everybody went to bed; for the streets were wrapt in darkness. Vessels lying in port under charter to carry coal to San Francisco had to sail in ballast.

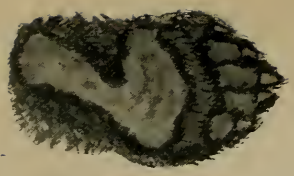
The strikers had plenty of money, and plenty of sympathy. A bishop and a chief justice openly espoused their cause in the papers. They had the best counsel to advise them. But they utterly and completely broke down. The very completeness of their organization was the cause of their undoing. When a strike takes place in San Francisco effort is made to confine it to the union immediately concerned. The other unions keep their men at work, and they support the strikers. In Australia every union was involved in the strike, and no one was earning money. The consequence was that when the treasuries of the unions were emptied and the savings of individuals were exhausted the strikers were reduced by famine. The striking miners made a feeble attempt to prevent the reopening of the mines by non-union crews; but the appeance of a few troops with gatling guns afforded them a graceful opportunity of confessing their defeat, and retracting. As for

the members of other unions, they simply resumed their individual sovereignty, and went to work without consulting the unions.

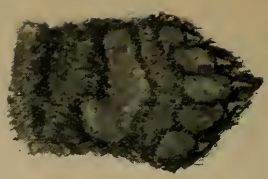
The strike was perhaps one of the most extensive and the gravest that has taken place in our day. It involved the greater portion of the population of the two leading provinces of Australia,—Victoria and New South Wales. When it began the treasuries of the unions were overflowing with money, and many of their members were independently rich. People felt so certain that labor was going to score another triumph that the most eminent members of the bar offered their services gratuitously to the strikers, and some of the most eloquent divines addressed their meetings with earnest words of approval. Yet, as Mr. Champion told them, they were bound to fail, and in failing to inflict a blow on organized labor in Australia which will leave it bankrupt in purse and heart for a generation.

Lawmakers and politicians are timid in dealing with organized labor unions because they fear that a vigorous enforcement of the law will be punished at the polls. It is the popular belief in political circles that members of unions can be relied upon to revenge their wrongs—real or imaginary—when election day comes round. It was to secure an opportunity for vengeance that the labor organizations throughout the country coerced a score or more of State Legislatures into adopting the so-called Australian Ballot system. But, in fact, experience does not confirm the notion that workmen vote as their unions bid. They seem to reserve that portion of their sovereignty for themselves. It is believed that there is not a single instance in American history in which a public man has been consigned to private life by reason of his opposition to the usurpations of the unions, though many men have closed their public career by playing the demagogue as champions of labor. At the election of 1890, in San Francisco, the Federated Trades Council scrutinized with infinite care the tickets put forward by the opposing parties, and marked certain candidates as enemies of labor, to be voted down. Their success was not up to their expectations. President Fuhrman, in the address he delivered after the election, stated: "We regret, exceedingly, the disastrous defeat the Council has suffered in its political boycots. Of all the candidates placed under the ban by the Council, only one was defeated."





BRUIN



BY THEODORE M. COPELAND

Few hunters outside of the books show an over-weening desire to meet Bruin in his own domain. In fact, it is said that the difference between the verdant sportsman and the experienced hunter lies in this very question. To the green hand the bear hunt offers every inducement, while the old stager, who has made many a plantegrade bite the dust, as the saying goes, is quite content to let the heavy berry-eater roam at large, unmolested, so long as he does not step beyond the borders of propriety.

"I shall never forget my first experience with a bear," said a companion with whom I was enjoying a hunt in the Southern Sierras. "I was young and ready for anything, and a fairly good shot so far as home experience would go, but I had never killed anything larger than an Adirondack deer, many of which I had brought down by the hypnotizing aid of the jack light. The vagaries of fortune brought me to California, and one fall found me prospecting with several others in a fine cañon that wound away up into the Sierras like a green river. I need not explain to you the charm the life has, as you know it. We were on the borders of the desert on the northeast slope of the mountains, and proposed leaving our horses at the entrance and making a day's trip up the different forks of the cañon. The day we started was a typical California one. The morning was as clear as a bell, and found us climbing up the rocky bed of the arroyo. As we went along, the cañon narrowed, and as we looked up, there was the rich blue of the heavens, outlined by the borders of the cañon, seemingly like an azure river flowing along. The sides of the cañon were richly wooded. Great white sycamores pushed their way up through the polished bowlders of the little stream. The fragrant bay gave out its incense, while high up the rich manzanita leaves gave a dark, rich tint to the cañon walls.

"We had gone about two miles when we came out into an opening or amphitheater, above which an old trail could be seen, and here we halted while an Irishman whom we had brought along was sent up to see if the trail was in a good condition for the horses. Taking a pick, he started on while we laid down on our backs in the grass, lighted our pipes and watched him. For a few moments he disappeared, then came out into view, circling around until he was sixty or seventy feet above us. All at once we saw him stop, then another form rose almost beside him, and the next moment our Irishman apparently plunged off into the cañon, while where he stood was a gigantic grizzly. After the first leap, the man disappeared, but we followed him by the waving of the cedars and wild lilac, in which the victim seemed bounding along, and such, in fact, was the case, as he shortly came to a standstill in a thick bunch of greasewood, slipped to the ground, and with a yell of terror at a rock that came rolling down, dashed down the remaining descent, and came into our improvised camp pale, breathless, *sans* coat, *sans* trowsers, or at least a part of them. Seeing that he was all right, a roar of laughter greeted him, which did not appease his injured feelings, and as soon as he gained his breath he told his story. He was walking along the trail with pick and shovel over his shoulder, looking down into the cañon when suddenly, without warning, he came face to face with a huge grizzly and two cubs, who were coming down the trail.

Utterly paralyzed with amazement they faced each other for a second, then he turned, and the bear sprang forward, striking him with one big paw so powerful a blow that he was fairly lifted from his feet and hurled into the cañon where he rolled down through the underbrush as stated, followed by rocks and stones, which

common along the Sierras, and sometimes they ventured down near the settlements. I well remember hearing a noise one night in my bee ranch, and going out I found a big grizzly nosing about, overturning the hives, and enjoying himself with the plunder. I ran back to the house for my rifle, and when I returned I

Thrown from the Trail by a Grizzly

he believed to be the bear and family following him. A more demoralized man never lived, and it was some time before he could be tempted to go on with the party, and it was the last time he ever went on as an advance guard.

"In the old times," continued my companion, "bears were very

almost stumbled over the old fellow, who now rose up with a growl, and stood for a moment in the clear moonlight, holding one beehive under his shaggy arm, while the other hung ready to roll me over. Yes, I dropped him with a single bullet, and avenged my bees by tanning the hide in full view of their hives.

"To give you an idea how common bears were in the old days, it was no unusual thing for fifty or sixty to be seen around the great stock ranches in a night, and my father has often told me of the sport in which he often indulged at the expense of the bears. I recollect his telling me of an experience at San Francesquito ranch, in what is now Santa Clara County. There was a large stock ranch, to which the bears came down in great numbers, and it was the custom of the young men to get up what they termed bear parties, which consisted in nothing more or less than in riding among the bears on horseback and lassoing them. The bears were not all vegetarians, and were attracted to the slaughter houses of the ranch, and on the night in question about a dozen of the young vaqueros of the county had made preparations for the sport, each having three horses apiece. It was a bright moonlight night when they stole out, mounted and rode out into the country.

"A shout soon told of Bruin's discovery, and riding in the direction of the sound, a big black ball was seen rushing along in the moonlight. Then the sport began. The object was to get as many lassos around a bear as possible. The first vaquero would hurl his reata about Bruin's neck, the animal standing up, growling fiercely, endeavoring to bite the rope, then making a savage dash at the horse. All this time the horses were dashing about, the men shouting with laughter, as the lassos whirl through the air and missed their mark. Soon another reata was slipped over the hind leg of the now enraged animal, and with horses pulling in opposite directions, the big creature was rendered completely helpless and forced along, aided and abetted by other riders until finally it was dragged near the house and killed, when the horseman would turn to join another party that had perchance secured still another bear. In this way a party of good vaqueros has in the course of a single night caught thirty or forty bears in the old days. Often the catch was not made without serious accidents. Bruin would sometimes chew off the reata, and rush at the nearest foe, and in one case the horse fell and the savage animal made sad havoc before it was killed. The picture of a big bear standing upon its haunches, waving its paws in the air, striking at the reatas, now pulling this way, then falling upon all fours to dodge the flying ropes, was most exciting; even the horses seemed to enter into the sport, though their horror was not always well concealed.

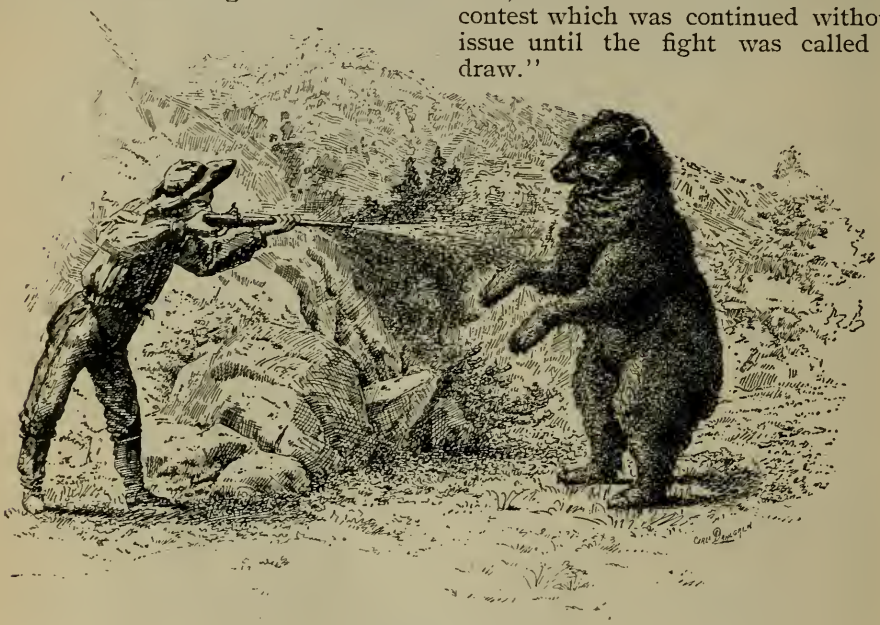
"The bears were not always killed, some of the most ferocious being tied up for another sport much in favor in old times, namely, bull and bear baiting. An announcement of a duel between these two animals always drew a crowd, and I well remember the last one I ever saw. It was at Tia Juana, the town below San Diego, that was almost washed away in the freshet of two years ago. The bear was a savage fellow that had been caught a few days previous, while the bull was equally famous for his supposed unrelenting disposition. He was a black, glossy beast, well kept, his hide shining like satin, while his little eyes rolled upward, showing their whites in a way altogether unpleasant to look upon. All the gallants and hunters of the vicinity were present in the seats arranged about the corral, and in the center stood the bull pawing the ground, throwing dust aloft that partly fell on his back and was carried away by the breeze just setting in from the sea. Finally every thing was ready, two bars were pulled up from an adjoining pen annexed to the corral and a big, gray grizzly shambled in, casting sly glances all about. A roar of applause greeted him, and the bull that was gazing in the other direction stopped and looked around in astonishment. One glance was sufficient. He whirled and uttering a moaning, drawling cry, ominous in its import, began anew the pawing,

Roping a Bear

hurling clouds of dust in the air to the distress of the ladies. The bear walked slowly around the ring looking askance at his enemy as if mentally sizing him up, and then quick as a flash the bull lowered his sharp horns and came on with a vicious rush. The bear was equal to the occasion and was on his feet in an instant, and as the bull reached him he slipped to one side, rolling over, dealing the bovine a terrific side blow that brought the blood streaming down his sides. A bellow of rage came from the now enraged animal and amid a roar of applause he turned and again made a magnificent rush. This time Bruin seemed to realize that he must face the charge, and whether he did or not the fact remains. The bull struck him fairly and squarely below the fore-arm, throwing him to the ground; a growl of rage and agony came out of the dust, and as it cleared away it was seen that the bear was trying some of the tactics for which he has long been famous.

"Its powerful fore-paws were about the bull's neck in a warm embrace, while its savage teeth were imbedded in the throat of the larger animal that was held to the ground as if by a bull dog. The bull roared in rage, tossed his head in the air, backed off, then lunged down on his enemy again, finally, in a last effort shaking him off. So far the bear had evidently the best of it, and slouched around the ring licking his chops, glancing up at the shouting Mexicans, who, like the old Romans, would have pointed their thumbs down had the occasion offered.

"The blood of the bull was up, however, and he soon returned to the contest which was continued without issue until the fight was called a draw."



Shooting a Bear

Bull and bear fighting is by no means obsolete on this coast. Several such contests have been seen during the past two years in this State.

My own experiences with the grizzly have been uneventful, though on one occasion I came near paying for my over caution and my friend nearly lost his life. We were hunting on the Coast Range, that even now is a *terra incognita* to many, and one night found ourselves far upon the range with the valleys lying below us and the ocean stretching away in

the distance. We slept under the bushes, and during the night I fancied we had company, and the next morning proved it by the presence of several big footprints, telling of Bruin. We determined if it was possible to follow him up, and in less than an hour we found indisputable evidence that we were well upon him. We were following along what was evidently a deer trail or something of the kind, when suddenly my comrade who was ahead stopped short and fell back upon me. I looked over his shoulder, and there was the biggest grizzly I ever saw, and the moment his cunning pig-like little eyes rested on us, he rose on his haunches. My friend moved a step to his left, intuitively to give me a chance, and we both dropped our rifles, aimed for the heart and fired on the second. It was all done so quickly that I think we were amazed, as the bear, instead of falling heavily, seemed to settle down. Gradually its huge form drooped, then its paws, and with blood oozing from its nostrils, the big head fell over, and the game was ours, so we thought. I remarked, "Well, that was quickly done," and perhaps for the first time in my life I did not throw the shell out of my rifle and recharge. My friend took out his hunting knife and stepped forward, and we stood by the side of the old fellow, perhaps five minutes, discussing how we should skin him. My friend wanted the skull, and stooped down to pry open the mouth, when, like a flash, the bear raised its head and seized him by the face, putting its teeth fairly through the jaw and crushing it. For a second I was dazed. My friend sent the knife he still held into the bear's neck, and at the same time I pumped several shots into the brute, which gave him his quietus, then picked up my companion, who, to make a long story short, almost bled to death and was disfigured for life. I learned that morning that there is danger in a dead bear.

There are two kinds of bears inhabiting American forests—the black bear (*Ursus Americanus*) and the grizzly (*Ursus horibilis*), though almost every old hunter will prove to his own satisfaction that the cinnamon or racer is a totally different species; but the verdict of science is that all the other kinds are but varieties, there being no specific difference between the brown and black bears. The black bear is found over a wide area in this country, from Maine to Georgia, and west to the California mountains. He ranges up to 500 to 600 pounds, is omniverous, and by no means the vegetarian so generally supposed. The mating time is in October, and by the first of December, as a rule, the female at least is safely ensconced in a den, in which she sleeps or hibernates during the winter, coming out with two or four cubs in early spring in a sorry and altogether ferocious condition, thin, lank and

Skull of Grizzly

dyspeptic from the long fast. When the bear goes into this sleep, it is in good condition and very fat, so that during the hibernating period it to all intents and purposes lives on its fat, all its functions being at a standstill, even its temperature being so low as to create the impression that at this time the bear is a cold-blooded animal. In former times there was good bear hunting where the city of Oakland now stands, and over the entire State they roamed at will, but the settling up of the country has driven them back into the mountains, so that to-day a bear is almost as rare in California as in Virginia.

PRESBYTERIANISM IN CALIFORNIA

BY REV. ROBERT MACKENZIE, D. D.

THE rush to California in early days was not all for gold. The men who came did not lay aside, so much as is supposed, the principles of good morals. Although many expected to stay in California but a short time, they strenuously endeavored to mark that time with what makes for industry, intelligence and religion. That less is known of these efforts than of the other phases of early California life results from the constant fact that in this world the material is always more noisy and more noticeable than the moral. This is a kingdom that seldom comes by observation. As in the midst of the migrations of miners from camp to camp there were those with longsighted faith in what the country was to be, who chose some fruitful valley and bent to the task of making it a farm or an orchard, and so planted the seed from which is growing the permanent prosperity of this State, so, too, there were those who thought of the school-house, the church, and philanthropic institutions, not as an after thought, but on the very threshold of their advent to these shores. Their planting was not in vain. Immediately there appeared the "blade," in these days appears the "ear," and in due time will appear the "full corn in the ear." Whatever may have been the expectation of only temporary sojourn which once characterized the minds of people here, it has given place not only to permanent abode, but to enthusiastic attachment to this fruitful soil and sunny skies as a home and a country for themselves and their children. It requires time even here to make large fortunes; scarcely is the sweat yet dry on the brow of those who first made them. But being made, and the mind at liberty to contemplate the possible uses to which to apply them, more and more they are being consecrated to the furtherance of the best interests of California. There is an impatience, not altogether unnatural, when these home interests seem to be forgotten or ignored. At the same time the eyes of those in the older parts of our country were not exclusively turned upon the material interests of this new land. In quiet and constant ways encouraging help came from the East to assist in establishing the philanthropic institutions of California. That some return should be made in the days of our prosperity is only another illustration of one good deed evoking another.

THE FIRST CHURCH OF CALIFORNIA

On the threshold it has been said: this is illustrated by the history of the different branches of the Christian Church, particularly by the Presbyterian branch; not that any marked preeminence is thus claimed for it, but rather that a place is claimed for honorable emulation and co-operation with others, all aiming at the same good of this commonwealth.

As early as February 1, 1849, the Rev. Albert Williams, then of Clinton, New Jersey, received a commission from the Presbyterian board of missions to proceed to California to lay the foundation of church work. On the fifth of the same month he took his departure on board the steamship *Crescent City*. Among the many fellow passengers he found some of the same faith, who told him that whereas they were going to California for gold they were desirous of securing and retaining there that which is better than gold. Aboard that ship on Sunday, February 11, 1849, between the Islands of Hayti and Cuba he met them for public worship. At that

service they resolved on two things: "not to lose their religious attainments, and not to do work on Sunday;" a resolution in the main well kept. And there, it may be said, was gathered the First Presbyterian church of California.

Mr. Williams arrived in San Francisco by the steamer *Oregon* on April 1, 1849. Going immediately to Benicia, then a busy centre, he found that the Rev. Sylvester Woodbridge had arrived by the first Pacific Mail Steamer *California*, a month earlier, and had already made the necessary prepapations for constituting a church, and there on April 15, 1849, they founded the First Presbyterian church, which was also the first Protestant organization, on the soil of California. Returning to San Francisco Mr. Williams organized the First Presbyterian church of that city on May 20, 1849, in the public schoolhouse, on the southwest corner of the plaza. The original members were the following: W. W. Caldwell, Geo. F. Turner, Frederick Billings, Mrs. Sarah B. Gillespie, Mrs. Margaret A. Geary, Mrs. Ann Hodghton. With these were associated as attendants on the Church services many names still active and well known in the commercial interests of the Coast. Among the earlier members uniting in 1849 was Judge W. B. Almond, of the "Court of First Instance." The first superintendent of the Sundayschool was Elder W. W. Caldwell.

Presbyterian Chinese Church

A tent, the property of a disbanded mining association being offered for sale, was purchased by the church. It was erected on a lot then lately secured on Dupont between Pacific and Broadway streets, on Saturday, and occupied for worship on Sunday, August 19th, 1849.

Mr. De Witt, one of the gentlemen who assisted, in its erection, being bantered on his religious zeal, played the old Adam and said he did it for his wife's sake. His interest went further, however, and he surprised the church by informing them that

First Presbyterian Church

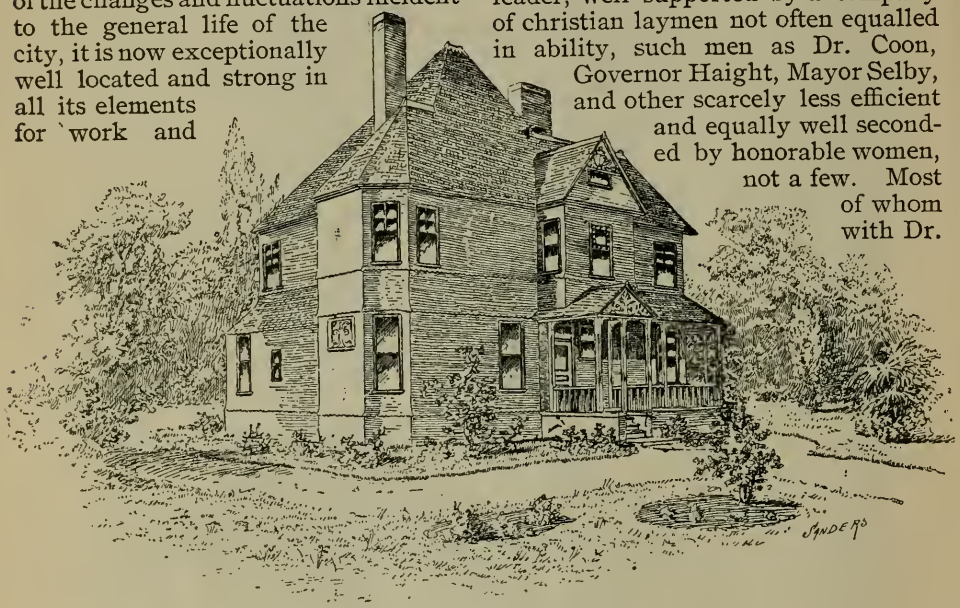
he had ordered from New York a church building, which duly arrived in November, 1850, and was erected on a lot on Stockton street, between Pacific and Broadway. This was the first Protestant church building of the usual ecclesiastical form erected in the city; it seated 750. At the dedication, 32 ladies were counted present, the largest number of women ever before collected in one place of worship in San Francisco. This building was burned in 1851, the last of the general fires that repeatedly swept the city in those early years.

Mr. Williams gives an account of the first marriage ceremony conducted by him. Elder Caldwell had noticed in the tent a young man rather attentive to a lady, and suggested to him the wisdom of marrying her. "Can't afford it," was the answer. "I shall see that the ceremony shall not cost you anything." They were married, Frederick Hathaway and May Elizabeth Smith, the minister receiving from the groom an ounce of gold as a fee. With a few subsequent changes the congregation was at last housed in the fine building on Stockton, near

Rev. Robert Mackenzie, D. D.

Washington street, now occupied as the First Chinese Presbyterian church. There they were served by such men as Dr. Anderson, Dr. Eells, Dr. Dodge, and Dr. Patterson, men of national fame. In November, 1883, the congregation moved to Van Ness avenue and Sacramento street, where they are now served by the Rev. Robert Mackenzie, D. D.

This is the mother Presbyterian church of San Francisco. Partaking of the changes and fluctuations incident to the general life of the city, it is now exceptionally well located and strong in all its elements for work and



The Montgomery Professor's House

worship. A goodly family of thrifty children has grown up from this center.

In 1851, Howard Church was formed by Dr. Willey, now principal of the Van Ness Girls' Seminary. Among his successors was that genial genius, the Rev. Henry M. Scudder, D. D., who has left his mark for good on this community more deeply than many others. Although but five or six years in that church, and now twenty years since he left it, it is still better known as Scudder's church than by its own proper name. At present, it is ably served by a young man of that sturdy Scotch-Irish fiber that has done so much for Presbyterianism in this country, the Rev. David H. Irwin. Among other laymen, two in particular stand out in preëminence in the history of that church, Wm. A. Palmer and Samuel I. C. Swezey.

Calvary Church was formed by members and friends from the First Church, on July 23, 1854. Their first pastor was the Rev. W. A. Scott, D. D., LL. D., an able and aggressive leader, well supported by a company of christian laymen not often equalled in ability, such men as Dr. Coon, Governor Haight, Mayor Selby, and other scarcely less efficient and equally well seconded by honorable women, not a few. Most of whom with Dr. Scott himself have gone to their reward.

Calvary was first built on Bush street, where the Mercantile Library until lately, was situated, and was removed to the central location, now occupied, on the corner of Geary and Powell streets. The Rev. Dr. Wadsworth, one of the ablest preachers ever on this coast served this church some years, and was followed by the Rev. John Hemphill, D. D., another Scotch-Irishman, who for 11 or 12 years served as pastor, raising Calvary

church to the leading position in the city and State. The present pastor is the Rev. Thomas C. Easton, D. D. On Dr. Scott's return, after an absence of a few years in Europe and New York, St. John's Presbyterian church was formed. It is now on the corner of California and Octavia, in a commanding position ably served by the Rev. Henry C. Minton, D. D.

From time to time other Churches were formed, until to-day there are 15. Prominent among these are the Westminster Church holding what is the geographical center of San Francisco, Rev. J. Q. Adams, pastor, now arranging for the erection of a new building, and Trinity Church towards the Howard Street church towards the extreme end of the "Mission." The pastor of the latter, the Rev. J. C. Smith, a young man of vigorous energy, has just led them in the work of erecting what is one of the best church buildings of the denomination in the city. It is a remarkable fact and unique in the history of cities that with one exception among the older churches, and one in the course of construction, all these churches are out of debt. This is largely owing to the wise benevolence of Mr. Alexander Montgomery, who, having liberally helped ten of these churches, did so on condition that they should make a strenuous effort to help themselves until entirely out of debt. This generous help in nearly every case was accepted in the spirit in which it was given and loyally seconded by the churches. The churches that did so were helped by him a second time. They are thus in excellent shape for enlarged and aggressive work, and

Rev. Dr. W. A. Scott, D. D.

Rev. David H. Irwin

most of them are taking advantage of the opportunity.

EDUCATION

Presbyterianism has always stood for liberal education. It requires its ministry to have pursued a full college course or its equivalent, and then a further theological seminary course of three years. Presbyterian families have always earnestly striven to provide a liberal education for their children whatever course in life lay before them. That desire early manifested itself in California. As early as March 1849, when yet their tents were scarcely pitched, we read that "Dr. Robert Semple, Thomas O. Larkin and Bethuel Phelps deeded a lot in Benicia sufficient for a college under the auspices of the Presbyterian Church." Later a school for boys, to which was added a college department, was conducted in this city on the corner of Geary and Stockton streets, where the Wigwam now stands. Subsequently it was removed to University Mound — the building now occupied by the Lick Home. For a long time this school was presided over by the learned and venerable Dr. George Burrowes, the veteran in the ranks, until his transfer to the Chair of Hebrew and Greek in the Theological Seminary. By a train of adverse circumstances this school failed

Rev. Thomas C. Easton, D. D

San Anselmo Presbyterian Seminary
Montgomery Hall

Scott Hall

Rev. Henry C. Minton, D. D.

to continue in the city, but was carried on with good results under Professor Gamble at Litton Springs and then at San Mateo, and by Dr. James Matthews in the Westminister School on Haight street, San Francisco. These educational interests are now continued and increased by the vigorous Mount Tamalpias Academy at San Rafael under the guidance of the Rev. Arthur Crosby. This Academy includes a college department, and in all its features is fully in line with the advanced subjects and methods of study of the day. Whereas the religious influence is not strictly denominational, it is thoroughly Christian. It is hopefully expected that this institution will grow into a well equipped college. Valuable as the great universities of the State are and heartily as their work is appreciated the presence of the Theological Seminary makes a college in San Rafael not only desirable but necessary. Constant inquiries are made by young men, native sons of this State, as to where they can properly fit themselves for the higher activities of life under pronounced Christian influences, and where they can receive a specific training for the Gospel ministry. That demand must be met as soon as possible. The Church on this coast has never had a wiser or more aggressive and tenacious leader in this line than Mr. Crosby, now at the head of the Mount Tamalpias Academy.

THE THEOLOGICAL SEMINARY

In November 1871, the San Francisco Theological Seminary was organized by the Synod of the Pacific. Of its first Board of Directors, although it is only about twenty years since they were appointed, the only surviving member is Robert J. Trumbull, who is now the efficient Secretary of the institution and to whose faith and

Rev. J. C. Smith, D D.

Scott Library Hall

works much of its temporal prosperity is due.

Among the early professors were Doctors Scott, Alexander, Burrowes, Poor, Eells, Lindsley, Fraser and Hemphill. Chief among these was Dr. Scott to whose personal and professional assiduity the character and continuance of the Seminary is largely due.

The present Professors are :

Dr. George Burrowes, Professor Emeritus, now eighty-two years of age, but wonderfully preserved in body and mind. He is the venerable patriarch of the family, who having come through the long wilderness march is spared to look in upon the better times that are dawning. Dr. William Alexander, Dr. Robert Mackenzie, Professor Thomas F. Day and Mr. Charles G. Buck, Professor of Vocal Culture and Sacred Music. The Rev. Henry C. Minton, D. D., has been recently elected Professor of Systematic Theology. Dr. Minton is in the early prime of life, a man of wide reading and travel, conspicuous for a mind well informed and disciplined, a conservative liberal in theology, holding the truth in love.

Rev. Arthur Crosby, D. D.

In the beginning the seminary classes met in the lecture room of different churches. The earlier students recall with much pleasure their experiences in the rooms of St. John's,

Robert J. Trumbull

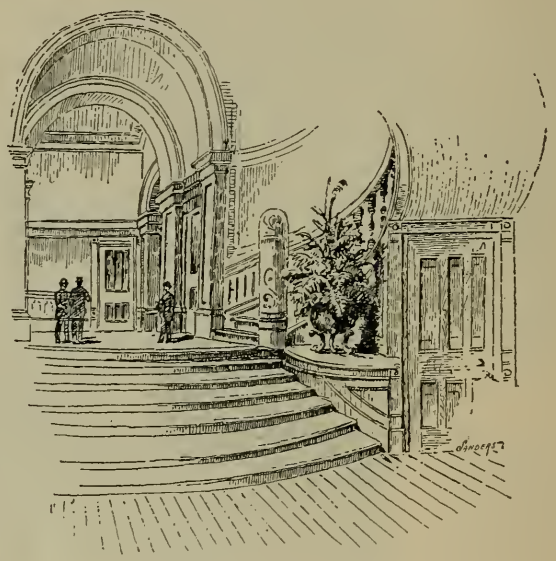
the walls ceiled with redwood and theology. In 1878 a convenient building was erected at 121 Haight street, which has been occupied until this present time. The importance of this institution to the future of the Church on this Coast was fully appreciated by friends in the East as well as here. Robert L. Stuart, of New York, among his many gifts to Presbyterian institutions, gave $50,000 to partially endow the Chair of Theology in this Seminary. Dr. Burrowes and Dr. Scott gave their valuable libraries, which, with libraries from friends in the East, fill the shelves with 18,000 volumes. Smaller but equally welcome gifts were made from time to time by local friends. About six years ago Mr. Wm. S. Ladd, of Portland, Oregon, gave $50,000 to the Chair of Pastoral Theology. The Churches of California, under the in-

spiration of Dr. Eells, gave $50,000 to the Chair of Church History. Nathanial Gray, an elder for many years in the First Presbyterian Church, one of its quiet, constant and able counsellors, who had contributed constantly to every good cause, gave the Theological Seminary three fifty-vara lots on California street, valued at $25,000. A. W. Foster, of San Rafael, gave fourteen acres of land at San Anselmo, in Ross Valley, as a site, if appropriate buildings should be erected. San Anselmo is but fifty minutes run from the city, with numerous trains each way every day at low rates. It is probably the most beautiful spot, all things considered, in California. The Seminary is surrounded by hills draped to the summits with perennial foliage, and dotted everywhere with suburban villas, itself standing on the summit of a high knoll in the valley. Then came the principal gift of $250,000 from a California pioneer, and one rocked in a Presbyterian cradle—Alexander Montgomery. It was conditioned on the Directors raising an additional sum of $50,000, which was speedily done, one friend in the East giving $30,000 of it. With this money the substantial buildings at San Rafael have been erected, consisting of Montgomery Hall, containing fifty rooms for the students; Scott Library Hall containing the library, chapel and lecture rooms. These buildings are models of strength and beauty. Mr. John Wright, of Wright and Sanders, the architects, is himself an active Presbyterian layman. The balance of money was applied to the Endowment of Chairs. In addition to this gift Mr. Montgomery gave a sufficient amount

Rev. William Alexander, D. D.

to erect three professors' houses on the grounds. Scholarships of $2,500 each came from Mr. J. D. Thompson, Mrs. Moses Hopkins and from others; one of $4,000 came from Mrs. Bulkeley of New York. Mrs. C. B. Alexander, of New York, has remembered the needs of the young men, natives of this State, preparing to enter the seminary with an annual gift of $500. Two scholarships ($5,000) were given by Mr. David Jacks, a Presbyterian Elder of Monterey. Mr. Jacks was a member of the First Church in 1849; taught in the Sunday School when it was organized, and because of the scarcity of such material in those days also taught in the Baptist Sunday School. His interest in Christian work has ever been thus wide, all the denominations feeling the help of his benevolence. These scholarships are auspicious beginnings which came at a time of great need.

Mr. Montgomery's gift is the first one of such a large amount given for Christian work on this Coast, and thereby marks a new and hopeful era. Mr. Montgomery is also of that energetic and benevolent Scotch-Irish blood; born in 1825, in County Down. His interest in education arises not out of what he received, but of what he did not receive in his own youth. Six weeks of common school was all he enjoyed. Like many men of similar experience he has been busy educating himself ever since, until there is scarcely a practical topic on which he does not have an intelligent opinion, or an important part of the old world or of the new, which he has not seen and studied. And like many men of similar experience, desires that other young men should enjoy in their youth that which he was denied. It is felt, however, that these are only beginnnings, but such beginnings as encourage all who love the church and its work in this State. They are a warrant that the judgment and sympathies of this community are sound on the permanent interests of mankind. They are an earnest that what is so well begun will be carried on by men of similar philanthropy to completion, and that here, too, Christian people will have their Princeton and their Yale, where their sons and daughters can be trained for the life that now is and that which is to come.



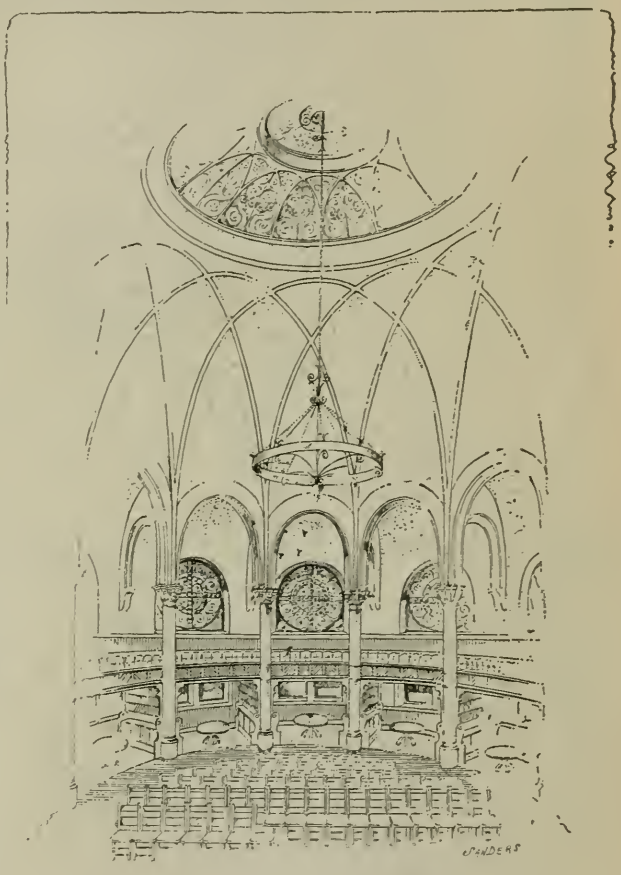
Entrance to Scott Hall

REVISION OF THE CREED

The Presbyterian Churches in this country and in others have been lately considering the advisability of making some changes in the forms of doctrine embodied in the Westminister Creed. The discussion naturally extended beyond the form to the substance of some of the doctrines. The desire of the Church, however, is confined to a revision of the language employed in some instances, and of the general balance and symmetry of all the doctrines. There is no serious desire or prospect of

revising out any of the fundamental truths for which this Church has so long contended against king and prelate, and to which it has affectionately adhered from its beginnings. It is natural that in a church where the ministers hold equal rank and where every Assembly is made up of an equal number of laymen and ministers, and where all laymen as well as ministers have equal rights to the floor, to deliberate and to vote there should be vigorous discussion over such proposed revision. As "decency and order" is the first commandment in the parliamentary proceedings of this Church, a committee of ministers and laymen distinguished for their ability, was appointed to guide this discussion in proper channels and to formulate its results, and in due time to present to the General Assembly of the Church what changes seem to be desired by the people. When the changes are thus formulated, they will be submitted to the people for final acceptance or rejection.

The Church on this Coast was honored by the appointment to that committee of the Rev. William Alexander, D. D., one of the first professors of the San Francisco Theological Seminary, and who continues to fill the Chair of Ecclesiastical History. Dr. Alexander is a conservative revisionist, and admirably represents the prevailing sentiment of the Church on the Pacific. What others have done for the seminary by gifts of land or money, he has done by his pen. He has made the Seminary known and respected throughout the land and in other lands.



The Seminary Library—Scott Hall

THE CHURCH PAPER

The medium of communication between the Churches of the Pacific is the *Occident*, published in San Francisco. It has been a difficult matter to establish such a paper here. Many of the people settling in California were attached to the religious papers of their early homes. All alive to the material interests of this coast, depending on the local papers for information on the secular interests, they were long content to remain somewhat indifferent to what was doing in the different churches here, while they carefully kept up their interest in all the details

Montgomery Hall

Alexander Montgomery

of the Church "back East." This is slowly changing. They see that their children are growing up here, knowing little of the Church "back East." The only Church they will know practically is the Church of the Pacific. The pressure of material things is so great that it requires a faithful effort to keep the fact before them that the cause of Christ and His Kingdom are growing here, too. As these things are duly considered, the *Occident* is appreciated in the family.

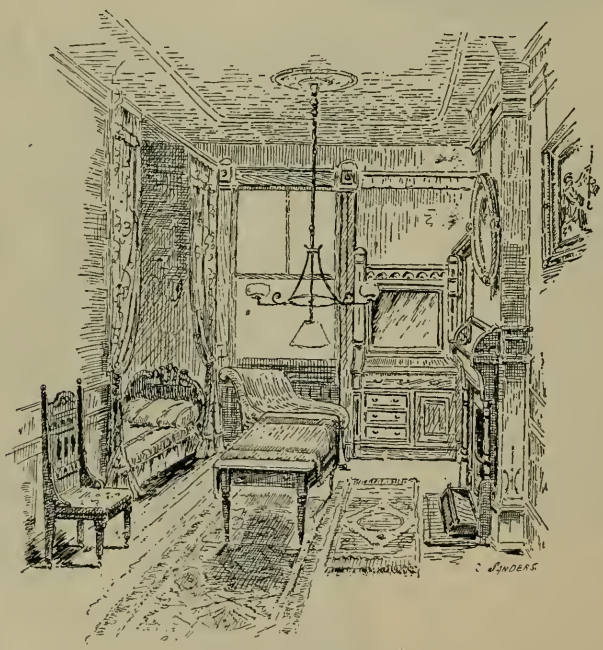
At the same time, the paper, under the editorial care of Dr. Nesbit and Dr. Faris, ranks in practical ability with the best of the religious papers of the country. Whereas, it is thoroughly devoted to the Church of the coast, it is national in its sympathies. The religious press owes much of its practical influence to that ready writer, Dr. C. E. Babb, better known as *Rusticus* and *Obadiah Oldschool.* Dr. Babb succeeded Henry Ward Beecher in the second Church of Indianapolis, when the latter went to Brooklyn. Health requiring him to come to this coast, he settled in the wilderness, near San Jose, a wilderness which has come to blossom like a rose. Dr. Babb has done more to inform the Christian readers of the East of the advantages of California than any man living. He writes not only for the *Occident*, but for the *Interior* of Chicago and the *Herald* and *Presbyter* of Cincinnati, and has done so weekly for many years. The first question asked by many coming here to visit or to

David Jacks

settle is: "Where does Dr. Babb live?" He is now getting to be an old man, but hale and hearty, his heart having lost none of its enthusiasm for California, and his pen none of its cunning in telling the glories of the land.

One can only wish that these men who have laid the foundations of our Christian communities could live to see the goodly fabrics that are surely rising upon them. In building the larger structures of our city, we notice that the stones of the lower stories are put in place in the rough, that during the months in which the construction continues debris gathers about them. When the roof is put on, the masons return to these rough stores, clear away the debris, and all danger from falling material being past, they then carve them into shapes of beauty. It is for these men to lay the foundations and be buried in debris, some of them forgotten and some unknown. When the social fabric is well up, the thoughts of men will return to them, and inquire for them and search diligently for the humblest and carve them into historic fame, and other ages will know that they lived and labored in wisdom and in faith building better than they knew.

[The present article, which relates to Presbyterianism in San Francisco, will be followed by others on this denomination throughout the coast. The picture of the Rev. Robert Mackenzie is used against his wishes; the publishers believe, however, that the article would be incomplete without it, and insert it upon their own reponsibility.]



Alcove in Montgomery Hall

SOME DOGS I HAVE KNOWN

BY CHARLES FREDERICK HOLDER

IT has always been my good fortune to possess a dog, sometimes two, and if it must be confessed, often a baker's dozen. They are good comrades and true, and when the full and complete history of the race comes to be written, it will be shown that man has no more faithful and trusty friends than the canine followers at his heels. In the present paper I merely intend presenting some facts regarding my own dogs, and others that I have known, giving some few instances of their intelligence. When I conjure up the long list of canine friends that have filled places in my affections during the past thirty years, it is difficult to select one that had characteristics more remarkable than another, but for a warm and loving nature commend me to an old greyhound (I would add "fat" did I not know that she would see this) who now holds forth in the southern country.

It is generally believed that greyhounds are not affectionate, but at least there is one exception. The old dog, Mouse, we called her from her color, was the embodiment of affection. She was my constant companion for five years or more, riding and hunting, and in her palmy days, when riding over the mesa, she would, at the word, spring up and stand behind me upon the pony, with her head under my arm on the keen lookout for "Jacks," and when one was started, bound down to soon run it down by a fine exhibition of speed. That dogs become mortified and ashamed was sometimes ludicrously illustrated. Once we were following a hare, and after a long run cornered it near a group of bottle-shaped cypress trees, at least fifteen feet in circumference. As a last resort, an inspiration in its way, the hare ran at the tree, and almost exhausted began to run around it, followed by the dog, while I pulled up and watched the trick. After four or five turns the dog began to get dizzy, and finally, with a most pathetic and shamefaced glance at me, she stopped, staggered up to the pony, and took her place behind me, while the Jack trotted off, having, as I thought, fairly won his liberty. On another occasion I saw a Jack, after at least a mile run, when about to be seized by Mouse, turn like a flash, dash between her fore legs and take the back track, just avoiding my horse's feet. We pulled up, and the dog stood for a moment, looking into the air and all around, then, with an ashamed look at my laughter, crept behind me. It was my custom to hunt with the dogs at least once a week, and they always knew when I was going. The sight of my crop, spurs and other accessories was the signal for various demonstrations. Sometimes when a servant had laid out various articles the night before, I would be awakened in the morning by the violent bursting open of the door, and the next moment Mouse would be standing fore paws on the bed, with my leggings in her mouth, her eyes speaking volumes of the sport to come. I often suspected that she informed the other dogs, as frequently when going out, I would find half a dozen greyhounds waiting, all eager to join in the sport. It is often said that, as greyhounds lack scent, they are easily lost and have no strong homing instinct. In my experience, I find the reverse to be true. Once on a hunt I lost my dogs about 15 miles from home. The heat was intense and they had given out completely. I spent the rest of the day in hunting for them, and finally gave them up and

A Greyhound Type
Photographed from life

reluctantly returned home. An hour later the dogs arrived, and I found later they had struck directly across country—a region in which they had never been before, showing that they were by no means deficient in the locating powers. In hunting with greyhounds, in my experience they invariably come back to the starting point after a long chase. My experience with greyhounds has been that they are faithful, affectionate and very intelligent, and as companions they have precedence over all other dogs in my estimation. An English scientist is engaged in a series of experiments to test the question as to whether apes talk. Dogs undoubtedly possess a language vocal, and expressed in various ways, and that they understand, or that some individuals understand just what is said, I have no doubt. On my departure from home, my dog always knew it in advance. If nothing was said, the packing of trunk or bag was sufficient, and she would follow me from room to room, evidently intending to see as much of her master as possible, and troubled in spirit at the approaching separation. As to understanding what is said, almost any reader of this paper will recall an incident in their own experience with dogs. One little black, woolly-haired dog, which I once possessed, was very sensitive in this respect. Address him in ordinary tone and praise his good temper and parts, and he was the picture of delight. Then without change of tone I would say: "A good dog, yet rather a nuisance sometimes. I fear we shall have to put him out of the way." This dire threat, uttered even in dulcet tones, had an instant effect. Von Molke—for this was his name—immediately put on a beseeching look, and with tail between his legs, would leave the room. This little dog would go down for the paper, bring up the mail, call the servant to open doors, by quick series of barks. When he wanted a drink he approached the water faucet and gave a low muffled bark. Another sound was used to ask for a blanket upon which he slept, and upon the door being opened he would enter, bring out the cloth, arrange it and go to sleep. A singular example of understanding in dogs was observed in a fine terrier called Mac which I owned some twenty years ago — Peace to his ashes. It was in an army garrison and Mac lived a life of pleasure, being on good terms with every one. There was but one disagreeable thing in his life. This was the firing of the evening gun at sundown. Mac evidently stood it as long as possible and finally one night just before sunset I saw him crawling upstairs and following found him crouched under the bed. In a moment the evening gun fired, when out he sprang and rushed downstairs shaking himself as though throwing off some disagreeable experience, and every night whenever he could. he went through the same manœuvre. This dog was especially at home in the water and would dive under and raise heavy objects from the bottom.

To show his faculty for finding his way home I will relate a single incident. One day General Sherman was visiting the fort and a party was gotten up to go to the Portsmouth Navy Yard and Mac was taken; at Portsmouth we drove five miles back into the country and there I missed the dog and returned believing him lost. A few days later, to my surprise, he stepped from the Baltimore boat and rushed up to the house, delight expressed in every motion.

I took pains to investigate his movements with the following result. He had made his way back to the Portsmouth Navy Yard and finding the tug gone had probably stood for a while in a quandary. He knew the large steamer that plied between Norfolk and Baltimore by sight as it passed our house every evening, often stopping, so it is possible that Mac saw the steamer across the river in the Norfolk slip. In any event he left

A Pack of English Greyhounds

the navy yard, found the ferry, crossed over to Norfolk, Virginia, then hunted up the Baltimore steamer of the old Dominion line and immediately struck up an acquaintance with the purser who, taking a fancy to him, locked him in his stateroom when the boat sailed so that he would not leave the vessel at Old Point Comfort, little thinking that the dog lived there; this the purser did for several trips, as he afterward told me, but one day as the steamer pulled up to the wharf Mac slipped down to the lower deck and as the gang-plank was run out he sprang ashore and a moment later was at home showing every evidence of joy at his return.

This dog was a canine philosopher and after his fashion did no little thinking. He developed late in life a decided antipathy to cats and usually was master. On one occasion he met his match and after a somewhat extended struggle he evidently gave up the contest and after a moment's thought trotted out and disappeared in the direction of the fort. It might have been twenty minutes, not longer, when Mac was seen returning, not alone but with a friend — a bull dog who lived within the fort. Mac led his companion to the spot where the cat was still cornered and without delay the combined forces began the attack which could have but one end.

A Subject of the Czar
From life. (Russian Poodle)

In brief, if Mac did not go to his friend for aid and communicate the situation to him, then outward signs pass for very little.

This dog was fond of going to church with us and insisted on taking his place in the family pew, and one Sunday I became conscious of unmistakable snores that grew louder and louder until a perceptible smile passed over the faces of those in the vicinity. Mac was the sinner and when awaked by a moderate push he uttered a roar of anguish that literally brought down the house. Several experiences of this kind led me to remark one *Saturday* night in Mac's presence that I should lock him up in the morning so that he could not go to church and disgrace us. When the morning came, and we prepared to go to church, I called the dog, who was lying in the road in front of the house (an unusual place) and for the first time he refused to obey me, answered my calls by wagging his tail and other protestations of friendship, but no amount of solicitation could bring him within my reach, and finally when we started he fell in fifteen or twenty feet behind us and went to church, creeping into the pew as usual, after we were seated, giving me a complacent look out of the corner of his eye. That the dog understood that I had designs upon him, and avoided me for that reason, I have no doubt. Among dogs the poodle is, perhaps, one of the most intelligent. Some years ago I made the acquaintance of a remarkable poodle. Its

Spaniel and Hedgehog
From life

Setters
From life

owner had shaved its hair, so that it bore upon its back a perfect anchor in high relief. Among the various performances, which the dog went through was a game of ball, and I learned from the boy who owned him that the poodle was a regularly installed member of a baseball nine and held the position of left field with honor to himself and the club. To illustrate to me how well the dog played, he moved away forty or fifty feet and turning quickly, threw the ball as though a regular baseman was before him. The dog caught it in his big mouth, wagging his tail as he ran to deliver it, slow balls, red hot, sky-scrapers, it was all one to the poodle, and to test him, I threw a ball skyward myself, as far as I could. The dog ran with remarkable judgment to about the place where it would fall, and in a half crouching attitude, moved about, and as the ball descended, settled back receiving it fairly in his powerful jaws. In a series of experiments I did not see him miss the ball once, and that he took the greatest delight in the game was apparent in every movement, asking as plainly as possible that the ball be thrown again and again. Dogs are like persons, they vary in their grades of intelligence, nor is it breeding, some of the most degenerate curs show the most intelligence, while the well-bred dog with an aristocratic pedigree is often more than stupid. What can be accomplished in dogs by careful selection is well shown by the types presented in the accompanying illustrations taken in England. They all spring from the same stock, but there is the same difference between the poodle and the greyhound that we find between the race horse and the dray horse. Of all the animal kingdom, the dog is man's best friend, nearly always faithful to him, solicitous of his welfare, content to share his perils and dangers, and when separated, often mourning his loss with a deeper grief than human friends. What could exceed the deep love and affection of the famous little Scotch Terrier, Greyfriars' Bobby, that upon its master's death flung himself upon the body, moaning and crying, refusing to be comforted? When the body was buried, the dog was taken away by some friends; but the next day the paling of the enclosure was found broken, and Bobby was discovered lying across his master's grave. A friendly sexton allowed him to remain, and the story being bandied around, found its way into the papers, and the little mourner became famous as Greyfriars' Bobby, He refused to leave the grave, and was fed by a friendly butcher, who brought him meat, but the dog gradually failed, and one morning, as the old sexton was making his rounds, he found the dog lying across the mound, fast asleep. He spoke to him, but the little dog was dead. Such instances as this, and they are not rare, have their moral. They suggest to us that the dog, and for that matter all animals, may know vastly more than we give them credit for; at least, they have their rights, and should be cared for and protected in them.

THE ORANGE IN CALIFORNIA

BY M. C FREDERICKS

THE London *Graphic* said not long since, that "as one drives through the orange-growing districts during the winter months—that is, in the full height of the orange harvest—the sight will almost be allowed to rank as a world's wonder." And rivaling the harvest is blooming time, when the cool, glistening green is thickly spangled with stars, and showers of snowy petals falling in lavish prodigality whiten the ground beneath. Everywhere is the hum of bees extracting sweets from nectar-filled blossoms, from which they make a most delicious honey, even, through their mysterious alchemy, imprisoning in their tiny waxen cells the very fragrance of the flowers, so like that of the tube rose.

It often happens that the ripe, luscious fruit is still ungathered when the trees are all abloom for the next year's crop, and then the scene is, as one has expressed it, "a general combustion of beauty."

But an orange grove, with its evergreen trees, compact and symmetrical, is always pleasing to the artistic sense, each season having a charm of its own. To this attractive picture may be added the closely cut cypress hedges, the broad avenues and well-kept drives, shaded with the stately eucalyptus, flowering magnolia, Grevilla robusta, — a beautiful tree, broad-leaved,—palms and the graceful pepper, with its feathery, drooping foliage and red berries, and the mountains always for a background. No wonder is it that one who sees an orchard for the first time becomes enchanted and is seized with an uncontrollable desire to possess one of his own.

It is indeed a most attractive industry, and a majority of those thus engaged are people from Eastern cities, who became fascinated with the remarkable beauty of an orange grove, and were lured to the outdoor life, with its sunshine and fresh air, by the opportunities offered for financial gain in this most healthful occupation. It is also an independent life, affording opportunity for mental culture and enjoyment, where one may have a home that rivals in elegance that of the city, and not be deprived of its wealth, refinement and education. Even when the owner finds it more to his taste to do business in town, he may still have his country villa, surrounded by orange trees that materially swell his income.

A woman may own and operate an orange ranch as successfully as her stronger brother, and instances are not rare where ladies, broken in health, have so invested their capital, and not only found themselves with a competency, but also with renewed health and energies.

Citrus fruits have been planted and grown with varying degrees of success in thirty-eight of the fifty-four counties of California, and orange trees are in bearing as far north as Redding, which is in sight of Mount Shasta, yet the area suited to its profitable culture is really very limited.

It is the opinion of some that citrus culture will never become a leading industry in the central and northern portions of the State, as frosts are of too frequent occurrence to permit the best results. However, there are well-sheltered localities in the foothills, to which this rule does not apply. This is particularly true of many places in the San Joaquin Valley and in Butte County, which has a larger area planted than either of the southern counties of Santa Barbara and Ventura, though very few are in bearing.

The orange does not thrive in proximity to the ocean. The excess of moisture and the fogs at certain seasons of the year produce a fungus on the trees and fruit that detracts from the fine, healthy appearance of both, and necessitates either the extra expense of cleaning or placing the fruit on the market at reduced prices. For this reason, the otherwise suitable lands of Santa Barbara and Ventura counties, as well as parts of Orange, Los Angeles and San Diego counties, are better adapted to lemons, which do not so much object to a moist atmosphere.

The Redlands Exhibit, Los Angeles Citrus Fair

San Bernardino stands at the head of the orange-growing counties. The trees are especially free from smut and fruit pests, and are remarkably bright and healthy in appearance, consequently its fruit is quoted at higher prices than elsewhere. The section, of which Riverside is the center, has far the most extensive area devoted to oranges, and is growing more rapidly than any other. Redlands carried away the prize at the State Citrus Fair, held at Los Angeles last April, and Riverside proudly displays three gold medals awarded at the New Orleans World's Fair, for the best collection of oranges from California, the best collection from any part of the United States, and for the best exhibit from any part of the world.

While there has never been a time since the first seeds were planted by the Padres at the Mission San Gabriel, about the year 1804, that oranges have not been grown in California, the industry, as such, did not come into special prominence until

after the experiment of Riverside, though there were already several famous orchards in or near Los Angeles, and some fine trees at Old San Bernardino. One very good reason why orange growing did not earlier receive more attention was, simply for home use. The famous Wolfskill orchard, planted about 1840, was the first attempt at growing them for profit, and it sometimes gave its owner a yearly income of $1,000 per acre. For many years it enjoyed the distinction of

Irrigating an Orange Nursery

because the whole country was one vast stock range, and there was no means of protecting trees except in garden plots, as Southern California was practically treeless, and the days of wire fences were not yet.

Several small orchards were planted soon after the Mission orchard, and like it, were surrounded by an adobe wall, the first fruit being grown being the largest in the United States, though containing only twenty-eight acres; but it is now a thing of the past, the city of Los Angeles having overgrown and absorbed it.

To the early dwellers in Southern California, the broad, beautiful valleys and rich mesas were fit only for grazing, because of the lack of rain in summer, and the scarcity of water.

But the flocks and herds have long since disappeared, and the arid waste is now marvellously fruitful through the miracle wrought by irrigation. It is impossible to obtain the exact figures, but according to the published statement of Secretary Lelong of the State Board of Horticulture, there are now in California the following number of orange and lemon trees:

County	Trees	No. over 5 yrs. old (or in bearing)
San Bernardino	2,467,200	415,722
Los Angeles	1,065,019	523,129
San Diego	236,227	33,721
Orange	159,095	87,357
Butte	120,794	3,389
Ventura	90,070	12,859
Santa Barbara	57,350	10,450

Total number of orange trees in the State (considered by some an over estimate) 3,958,451. Number in bearing, 1,025,899. Total number of lemon trees in the State, 616,467.

Last season's shipments of oranges and lemons from the Southern counties were:

	Boxes	Carloads
Los Angeles	632,071	2,212
San Bernardino	487,882	1,708
Orange	147,332	516
Ventura	19,475	68
San Diego	18,861	66
Santa Barbara	6,478	23
Total	1,312,099	4,593

Of this shipment, 20,904 boxes, or 700 carloads were lemons. As the shipping season extends from the middle of January to the middle of June, it would require a shipment of three train loads of ten cars each, per day, for that length of time to market the crop, Sundays not excepted.

The large profits obtained from the few old orchards at Los Angeles and San Bernardino led to the bold experiment, twenty-one years ago, of diverting the waters of the Santa Ana River, which were conducted on to the arid plains some distance below, with the sole intention of growing oranges as a business.

The land without water was valued at $1.25 per acre, and at one time its owner refused to pay taxes on it any longer, as it was "utterly worthless."

The scheme was considered one of the wildest, as there was no evidence that oranges would do well in that locality, while many thought there was sufficient reason why they would not. However, enough daring men were found to buy the land at from $10 to $35 per acre, with water, and plant orchards. And thus was begun the first real orange growing on an extensive scale, and the result is—Riverside, while Pasadena, Ontario, Pomona, Orange and other localities tell a similar story. To be sure, their water system cost a round million, and it has required hard labor and much patient waiting; but fifteen millions is a conservative estimate of its present valuation, and it is far from having reached its maximum value. In proportion to population, Riverside is said to be the wealthiest region in the United States.

Soon after the pioneer orchardists of Riverside came the Indiana colony, and planted the groves of Pasadena, now one of the best known resorts in the world, and since their success, fruit-growing settlements have sprung up as if by magic. Water is being developed in ways not dreamed of a few years ago, by the construction of dams and reservoirs, and by this means an abundance of water will be secured, in time, for all the lands of the San Gabriel and San Bernardino valleys. With the increase of irrigation facilities, the limits of the little fruit-growing settlements between Los Angeles and San Bernardino have been expanded until it will not be many years before they join each other, and the entire distance along the three lines of railroad connecting the two cities will be a continuous succession of fruit orchards, in which, of course, the orange will occupy a prominent place.

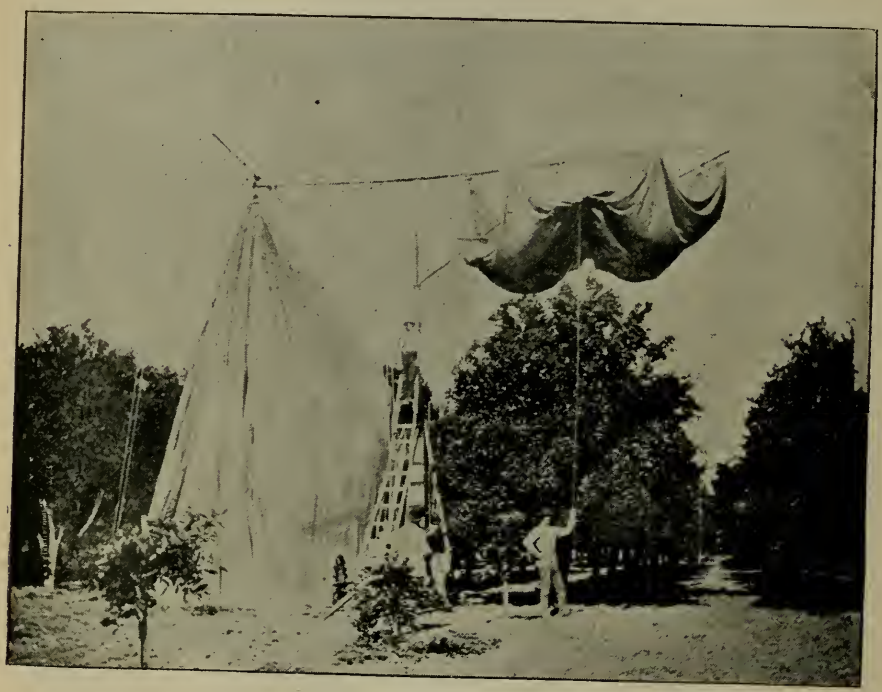
Numerous companies are developing water for what they consider orange land. The Arrowhead Reservoir Company is the most gigantic enterprise of this kind, it proposing to

A Seedling Orange Grove

construct a series of reservoirs on the eastern slope of the mountain range, bringing the water through a tunnel to the western side, and then a pipe line will extend from San Bernardino westward along the foothills into Los Angeles County. The work is already under way. It will cost a million dollars and irrigate thousands of acres of land.

The Bear Valley dam is being strengthened and the reservoir enlarged, and these two systems will cover a large acreage of good orange land. Large irrigation companies have been formed in San Diego County, and their systems will also include orange lands and a large amount that will be especially good for lemons. The Otay Valley will be watered by the Le Carte Company, Linda Vista by the Pama Company, and Fallbrook by the San Louis Rey Company. They each expect to irrigate 200,000 acres. Other important systems are already completed, and never before in the history of orange culture has there been such activity in planting as last year, and this season promises no abatement. In San Bernardino County alone 9,316 acres were planted in 1891, of which Riverside planted 4,000 acres. Redlands stands next with 1,200 acres, Alessandro following close after.

Pomona has an orchard of 400 acres, part of it just coming into bearing, which is said to be the largest in the United States, and the largest bearing orchard—90 acres of Washington Navels—is owned by H. B. Everest of Riverside, while Pasadena, Orange Duarte, San Gabriel, Pomona and Ontario have hundreds of acres in the orange.



Contrivance for Pest Extinction

The orange will bear five or six degrees of frost if for a very short duration, but if such temperature continues for several hours, or occurs several nights in succession, the fruit will be injured, and young nursery stock affected, though the trees may

not suffer. There is no absolutely frostless locality, as the present season has fully demonstrated, and the better the situation in that respect, the better for the purse of the grower. The extent of injury resulting from a temperature of 25° F., or lower, will be largely governed by the condition of the trees, whether dormant or growing, and of the soil whether wet or dry. It is always colder on the lowest soil, and even in the most favored districts the higher grounds are preferable.

An abundance of water for irrigation and a warm, dry climate, as nearly free from frost and fog as possible, is of more importance than soil, though poor, heavy soils, or land where water is very near the surface so that the roots stand in excessive moisture, should be avoided.

The cost and profitableness of a grove vary according to location, expense of preparing the ground, varieties planted, system of irrigation and cultivation, and skill in handling and disposing of fruit. Climate, soil and water must be supplemented by intelligent and well-directed care to insure success. Riverside furnishes an excellent example of the results when all these conditions combine and orange culture is pursued systemmatically and scientifically. Before twenty years had passed, 5,000 people resided on 6,000 acres of land, and had an income from fruits of a million and a half per year. The older orchards are now valued at from $2,000 to $3,000 per acre, though a number of those who own the best groves consider that there is no better investment for a reliable income, and

The Ladies' Exhibit of Los Angeles Citrus Fair

are not offering them at any price. Seventeen reports on oranges sent by Riverside to the Twenty-eighth District Agricultural Association in 1890 showed an average cost per year for cultivation, irrigation and fertilization to be $41.37 per acre, and a net profit of $455.77. The Pasadena Board of Trade has recently issued a pamphlet which can be obtained on application which shows some remarkable statistics in orange culture.

First-class budded trees will begin bearing the third year. It is not uncommon for four-year-old Navels to yield a box of oranges to the tree, and at five years they will net $300 per acre. At ten years old they are in good bearing, though neither they nor the seedlings are considered in full bearing before twenty years. As none of the California budded orchards have reached that age, it cannot be determined what their maximum yield may be, but the fruit from the oldest trees has sold for as high as $1,600 per acre.

The following table gives the cost of a Navel orchard, if all the work is hired, up to the time when it becomes profitable, though the price of land varies so much with locality, water right, etc., that there can be no definite standard, prices ranging from $150 to $500 per acre:

10 acres of land at $300	$3,000
Plowing and leveling the same	100
1,000 budded trees at $1.00 each	1,000
Planting and care for, first year	250
Care, second and third years	300
Care, fourth and fifth years	400
Water for the five years (say)	175
Taxes and incidentals	200
Total	$5,425

A seedling orchard begins to bear in six or seven years, but it will require ten years to yield a revenue of from $300 to $500 per acre gross. From this time on, its product rapidly increases. Because of its slow growth and the fact that the fruit does not bring more than half as much in the market as some of the budded varieties, late planting has been almost entirely of the budded fruit, though the seedling still has staunch friends. It increases in productiveness for a great many years, is more hardy and not so easily injured by frost, becomes a much larger tree, and makes up in the quantity of fruit what it loses in price.

A seedling orchard at Highlands, San Bernardino County, has netted $1,730 per acre. Some of the seedling trees at San Gabriel Mission, notwithstanding the gross neglect to which they have been subjected, are still in bearing, and in Europe there are trees several hundred years old.

The first orchards were all seedlings, but the introduction of budded fruit produced a finer quality and quicker returns. The quality of all California oranges has been greatly improved of late years through better care and adoption of the best varieties for the soil, consequently are growing more and more in public favor.

Although there are a hundred or more varieties, only a few are grown for profit in this State. The best variety is the Washington Navel, the name being derived from a peculiar umbilical mark, where a rudimentary orange, or occasionally a tiny well-developed one is tucked away just within the blossom end of the fruit. This orange is large, firm, highly colored, smooth-skinned and seedless. Then follows the Mediterranean Sweet, which ripens late, often not until May or June; the Malta Blood, of fine texture and flavor, the pulp mottled and streaked with dark red, sometimes being almost entirely that color, hence the name; and the St. Michael, small, firm and juicy, very thin skin, pale yellow and will keep until August. All are good, but ripening at different times, they prolong the marketing season. The Navel may be marketed from Christmas until the first of April, and the others from April until the middle of July.

As has before been said, the seedling is good, hardy and prolific, and a profitable tree to grow if one has the

Propping up the Navel

patience to wait. Nearly or quite all the budded trees are semi-dwarf and comparatively thornless, while the seedlings are thorny. The Navel tree has a tendency to overbear to such an extent as to break itself down unless well propped, and all kinds need more or less propping to prevent damage to the tree.

Picking the Navel at Riverside

There are various ways of bridging the time until an orchard becomes profitable. A man who purchased land at Redlands planted it, and then worked at the carpenter trade to pay expenses, his wife superintending the orchard. Seed was planted, and a large orange nursery grown, she giving it much personal care, and at the proper time the entire stock was sold to one purchaser for $20,000. It may be interesting to add that a little later they sold the ranch for $20,000

more, after reserving sixteen acres for themselves, and all this from an investment of $1,500 seven years before.

The scarcity of trees for the extensive planting of the past few years, and the consequent high prices, has turned such attention to growing

Irrigating an Orange Farm on Level Ground

nursery stock, that soon the home supply will equal, if it does not exceed, the demand. A single grower planted a *thousand gallons* of seed last season.

The seed is drilled in rows in soil loose and sandy enough to not bake after irrigation. The seedbeds are watered about twice a week during the first summer, and require constant care. It is better to protect the plants from the hot summer sun when very young, and also from frost in winter. This is done by stretching muslin over them, though many not overcareful growers omit this part of the work, and their plants and bank account suffer accordingly. When one year old, they are transplanted into nursery form.

Budding is done the second or third year, those budded when three years old making the best trees. When the bud is well started, the original top is cut away and the young shoot supported by being tied to a stake. In time, the top is nipped so that it may send out branches and form a sym-

metrical tree, and in a year after budding it is ready for the orchard. As a rule, not more than half the plants that come up in the seedbed live and make marketable trees, though a skilful nurseryman may save 75 per cent of them.

The proper distance apart for planting in the orchard is from 20 to 24 feet feet for budded trees, and from 25 to 30 feet for seedlings, but the rule in the past has been only about twenty feet for each. For absolute safety the trees are, when young, protected from frost by wrapping with burlaps, or grass, yet many growers do not observe this precaution.

A net income of $500 per acre may be relied upon when an orchard comes into bearing, though productiveness is governed by care and feeding. An outlay of $30 per acre each year for fertilizers will be returned many fold at harvest time. There are many instances where well-fed groves at Riverside have netted from $750 to $1,100 per acre.

It is true that in a number of cases orange orchards have proved failures, but like all failures there was a reason for it. Most frequently it has been because of lack of proper selection of location. The tree will bear more frost than will its fruit and the temperature in winter may be such that although the trees will do fairly well, when the bearing age arrives the grower is disappointed to find the fruit frosted year after year, and in his case, at least, concludes orange growing is a delusion and a snare.

Again, water will be developed and spread over as large an area as possible, the quantity per acre being determined by the amount required for the young trees, but when in bearing, a much greater quantity of water is required. If the supply cannot be increased, the fruit will be inferior, and "orange growing does not pay." Or the land and water may be right, but the location be where the winds will whip the fruit until it is either blown from the tree, or so badly thorned and chafed as to seriously affect its market value. Windbreaks should protect the orchards even in the most favored localities, for the more the trees are protected the better. Another cause of failure is that the work is often undertaken as a speculation and not as an industry. Oranges will not grow of themselves, and the man who expects to take tons of fine fruit from an orchard which receives little or no care, will be disappointed. It does not pay to raise poor fruit, whatever the cause may be, but it does pay well to grow good fruit and no tree gives more bountiful returns for generous treatment.

Irrigation is necessary every five or six weeks, from March until November. The water is turned into a flume or head ditch along the highest side of the orchard, and from this flows in tiny rills through previously prepared furrows until the ground is thoroughly saturated—from 36 to 48 hours.

The scale is the orange growers one enemy. Of these the most troublesome are the red, the white, and the black. The latter becomes formidable only in moist localities, particularly in proximity to the ocean, and is another reason why orange growing near the coast is more difficult and less remunerative. The dangerous white scale at one time threatened the destruction of the business in this State, and as it did not confine itself to orange trees but spread over every other tree and shrub, other fruits were equally endangered. A search was made to find a natural enemy that might succeed in its extermination where man failed. The result was the importation from Australia, three or four years ago, of the Vedalia cardinalis or Australian ladybird, a tiny beetle. After being thoroughly tested, they were distributed in the various infected districts, and the white scale is now practically a thing of the past, as is also the industrious little friend of the orange grower, the

The Ontario Exhibit—Los Angeles Citrus Fair

ladybird. They will not devour other insects, but in the absence of their natural food prey upon each other, hence their disappearance with the scale.

Both the black and the white scale are easily discovered, while the red scale is so minute as to be difficult to detect, and an orchard may become infected before its presence is known. Since its nature has been learned, there has been much experimenting, and it is now under control. By an Act of the Legislature, each county is allowed three Horticultural Commissioners, who are appointed by the County Supervisors, and their duty is to superintend the inspection and destruction of all insects injurious to trees or fruit. In the orange growing districts the inspectors go about armed with a ladder and microscope (the latter to detect the red scale) and any suspicious looking fruit or foliage is carefully examined. If a single red or white scale is discovered, the tree is marked for the fumigator. It is then covered with a tent which confines the fumes of a gas preparation, and is thoroughly disinfected. When the entire district is finished, the inspection begins over again, thus making it impossible for the scale to gain a foothold. The commissioners and inspectors are paid by the county and the expense of fumigating is borne by the grower. If he refuse or neglect to comply, the affected orchard is declared a public nuisance, and proceeded against accordingly.

Since the success of the Australian ladybird, an entomologist has been sent abroad in search of a like remedy for the red and black scale and other injurious fruit pests, the State appropriating $5,000 for the purpose. His reports are of the most gratifying nature, and the horticultural officers have just received 30 species of beetles, new to this State, which Prof. Loebele is positive will destroy not only the insects injurious to citrus fruits, but all those that attack the deciduous trees of the State as well.

Prof. Coquillett, of Los Angeles, is now colonizing these beetles preparatory to distributing among the orchards.

The orange, which scientists tell us is a berry, begins blooming in California in March and continues until the end of April. In the hot summer sun the young oranges grow but slowly and are not distinguishable in hue from the foliage of the tree. It is when the snow-crowned mountains look down on the fruitful valleys that they assume the brilliant gold that becomes so effective in their setting of dark, rich green. Unlike other fruit, the orange is not ripe when its color is fully developed, and for years the reputation of California oranges suffered because they were marketed as soon as properly colored, though still as sour as lemons. It is yet two or three months before they have developed their full sweetness.

Florida is the strongest competitor and produces nearly three times as many oranges as California, but as the Florida crop ripens from Dec. 1st to March 1st, and California, from Feb. 1st to May 1st, they do not seriously interfere.

The United States now produces more than we import and the condition of the imported fruit upon arrival is such that it must be quickly marketed and consequently only affects the large cities where landed and their immediate vicinity. As we cannot compete with the imported oranges in price, it is only our finest fruit that reaches these cities. A very large proportion, however, is marketed before reaching the Atlantic Coast States, Chicago, St. Paul, Indianapolis, Cincinnati and Kansas City being great distributing points..

In picking, great care is used not to bruise or damage the fruit, each orange being clipped from the tree. At the packing house they are run through a grader, which assorts the sizes ready for packing. They range from 112 to 240 per box and a good packer will average from 65 to 70 boxes per day.

Los Angeles Citrus Fair
Pasadena Tower in the Center

Wages paid for packing is four cents per box, picking the same, and with other expenses, brings the price of handling up to fifty cents per box, while transportation to Eastern market costs from eighty-five cents to ninety cents more. A large percentage of the crop is sold F. O. B. at the place where grown.

The growers in the various districts are organizing associations for the more systematic marketing of fruit, as by united action uniform brands may be established, a more reliable market created and gluts avoided by sending every carload to the right place at the right time. This will also prevent the false branding of inferior fruit, which has wrought much injury in the past.

The present crop promised to be more bountiful than ever before, but the windstorm that swept over the San Gabriel Valley in the autumn, and the cold weather of December will materially reduce the quantity of fruit, although the damage was not so great as was at first feared.

Citrus Fairs have been held for a number of years past, and nothing furnishes such opportunities for artistic arrangement and brilliant effects as the deep-hued orange of all sizes, from the miniature Mandarin to the overgrown seedling that may almost be mistaken for a pumpkin, intermingled with the paler lemon, and relieved by evergreens and a wealth of such magnificent flowers as are found only in California.

Each year surpasses the preceding in the gorgeousness of the display. The State Citrus Fair, held at Los Angeles, a year ago, was transferred bodily to Chicago, where it was known as the Orange Carnival, and attracted thousands of visitors. March 2d was the date fixed for the opening of the State Citrus Fair this season, which was also held at Los Angeles.

Very liberal premiums were offered, and everything combined happily to make it exceptionally attractive. Plans are being made for an exhibit at the Chicago World's Fair, which shall in every way be worthy the industry it represents, and the State within whose borders are grown every natural product of our splendid galaxy of States.

Every year a Citrus Fair is held in Los Angeles at which the various towns and counties of Southern California are represented and where some remarkable structures are reared made wholly of oranges. There is much rivalry between the various localities, and Riverside, Pasadena, Redlands and Sierra Madre Navels compete side by side the gleaming rows presenting a beautiful appearance, the entire hall being a blaze of color. In the present paper some of the designs of the citrus fair of 1891 are shown, each being characteristic of the town and often artistic and beautiful in the extreme.

The Fair of the present year was, if anything, more beautiful than its predecessors and was enjoyed by the hundreds of tourists who make their winter home in the southern countries.

The Fair of 1892 opened its doors at Hazard's Pavilion, Los Angeles, and continued three days — fifteen hundred boxes of oranges being used to produce the rare and attractive designs exhibited. The hall was lavishly decorated with ivy, the fragrant pepper, thousands of palm trees and flowers of all kinds and descriptions. A prominent feature was a gigantic crown of oranges supported by columns wound with ivy and containing a huge pyramid of oranges.

Pasadena is the crown of the San Gabriel and its emblem which was made up of ninety boxes of oranges was a feature of the display. San Diego was represented by a fort of solid oranges, the base being made of lemons, fifty boxes being employed in its construction. Colton terrace represented this town — an orange horse — suggesting the joke colt-on-terrace.

Highland and Rialto, both famous for their oranges, made a fine showing for young groves. A gigantic lemon of lemons represented Ontario, while Redlands, the famous orange town, showed an orange high school, suggestive that the town had superior educational facilities, as the building was a model of the proposed school and that the children undoubtedly had a surfeit of oranges. The building was thirteen by thirty feet and was illuminated by electric lights.

Duarte made a remarkable display, while Orange County was represented by a gigantic orange composed of no less than three thousand smaller oranges. Riverside, famous for its groves, displayed a huge lemon formed of oranges, using three hundred and fifty boxes on the display.

Santa Barbara, La Cañada, Ballona, Long Beach, Porterville of Tulare had fine displays — the latter showing a branch having one hundred lemons. Vernon and San Gabriel, the latter the site of the famous Winston, Patton and Dobbins' groves, made a fine showing, while Pomona and Ventura and other towns added to the interest. The Fair upon the opening night was a revelation to the hundreds of eastern people on the floor. The morning papers announced a blizzard in the East — snow banked high in the cities and terrible storms on the Atlantic border—yet here in the same latitude was a wealth of semi-tropic verdure and fruits, taken from the fields the day before to illustrate the bounty of California.

The Fair was opened by Governor Markham who gave the four thousand people who were on the floor a stirring address in which he urged the dwellers in the orange belt from Marysville to San Diego to lend their energies to a representative exhibit at the World's Fair.

The Marysville exhibit this year was a surprise, as the impression has gone out that oranges were confined to the South, yet when the World's Fair Exhibit is made California, north and south, will vie in showing the people of the world orange trees in full fruit and flower in the city of Chicago.

EDWARD S. HOLDEN, LL. D.

BY JAMES R. ANDERSON

AS long ago as 1874, when James Lick was seriously considering the founding of an astronomical station on this coast, Professor Edward S. Holden and Professor Newcomb were called upon to formulate plans for the building and management of such an establishment. Mr. Lick was so well satisfied with Professor Holden's work, that through the medium of D. O. Mills, president of the first Board of Lick Trustees, he offered Holden the directorship of the Observatory, and his offer was accepted. The administration of the funds did not satisfy Mr. Lick, as the work did not seem to progress rapidly enough, so he cancelled the trusteeship of the first board, then of the second board, and finally appointed a third board with Capt. R. S. Floyd as the president. Capt. Floyd confirmed Prof. Holden in his position, and since that time the work has gone on uninterruptedly.

Prof. Holden is a man of perhaps forty-five years of age, rather grave in demeanor, but always an enthusiast on the subject of astronomy. He was born in St. Louis, and is a graduate of Washington University. In 1870 he graduated from the United States Military Academy, and then for a time served in the Engineer Corps of the Army. In 1873 he was made Professor of Mathematics in the Navy, and Astronomer at the Government Observatory in Washington. In 1876 he was sent on a Government mission to England, and two years later took charge of the Government Eclipse Expedition to Central City, Idaho. In 1883 he was sent to Caroline Island in the South Pacific Ocean in charge of another expedition.

He resigned from the Navy in 1881 in order to take charge of the Washburn Observatory at Madison, Wisconsin, and this position he held until he took up his permanent residence in California as President of the State University in 1885.

Nearly all the specifications and equipments of the Lick Observatory at Mt. Hamilton have been made at the instance of Prof. Holden who has given the subject almost undivided attention ever since the matter was first broached to him in London in 1874. The result is that while the endowment of this Observatory is much smaller than that of any other Observatory in the world, the money is so wisely applied, that quite as much and in some cases more, efficient work has been accomplished here than in other richer establishments. Prof. Holden's photographs of the moon have been of special value to the scientific world, and are regularly sent to the great German and Prussian astronomers.

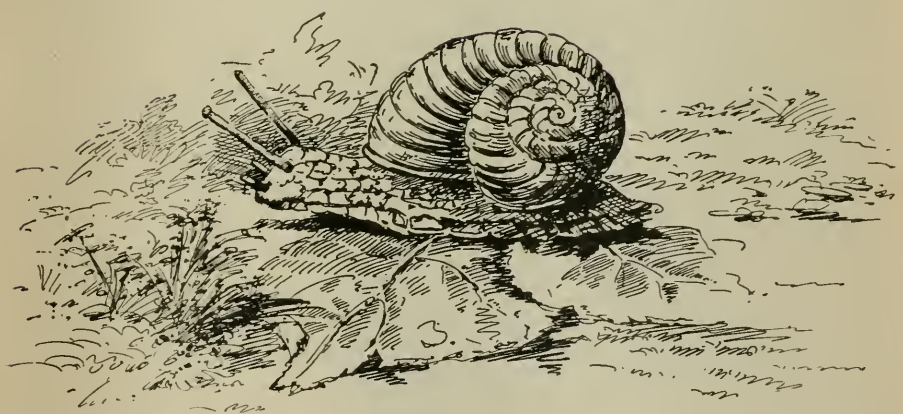
It has been and is Prof. Holden's main object in life to make the Lick Observatory a scientific and educational center for the whole world. He has spared no effort to draw about him eminent scientific men from every part of the world, and he can count among the 16,000 or more visitors to the Observatory from June 1888 to June 1891, such persons as the Earl of Rosse, Dr. A. Marcuse of the Royal Observatory of Berlin, E. D. Preston of the United States Coast Survey, H. F. Newall of Gateshead, England, Prof. T. C. Mendenhall, Chief of the United States Coast Survey, and many others.

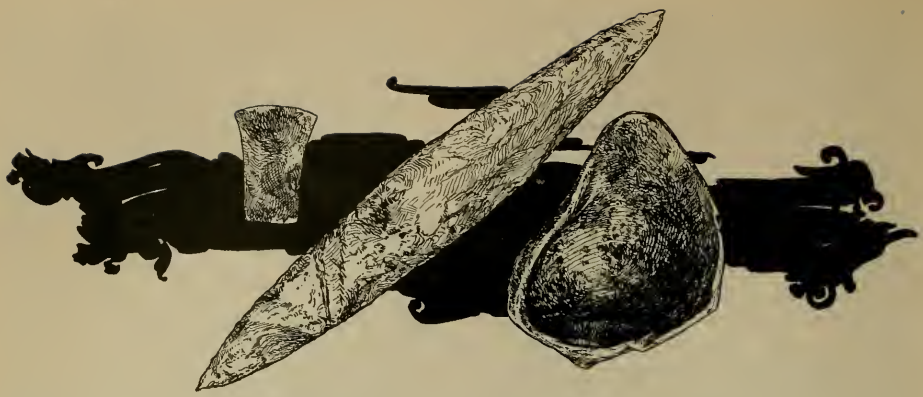
From time to time students from various educational institutions are invited to Mt. Hamilton by Prof. Holden, and are given practical lessons on the workings of a great observatory.

With larger means at his command, Prof. Holden could make the Lick Observatory the finest establishment in the world, for the climatic and almospheric conditions of Mt. Hamilton are such as to permit an almost continuous series of unobstructed observations.

Prof. Holden is a member of the National Academy of Sciences and an honorary member of many other scientific societies in both America and Europe. He is particularly interested in the Astronomical Society of the Pacific which was founded in 1889, and which has flourished bravely since its very inception.

Besides carrying on such close observations ever since he took up his residence on Mt. Hamilton in 1888, Prof. Holden has contributed liberally to the leading magazines of both continents, his articles on the Moon in the Century Magazine attracting wide-spread attention when they first appeared a few years ago. Such articles, with their beautiful illustrations are a valuable factor in the popularizing of astronomical lore: but it is not often that one finds a purely scientific man who can use his pen with sufficient ease and fluency to render his scientific data attractive to the masses.





RECENT DISCOVERIES AMONG THE MOUND BUILDERS

BY WARREN K. MOOREHEAD

Field Assistant World's Columbian Exposition, Dept. of Archæology

[The United States Government has determined that its treasures in the way of antiquities, and especially the remains of early man, shall be fully presented at the coming World's Fair. To this end a department of ethnology and archæology has been organized with Prof. F. W. Putnam of Harvard College as chief and Warren K. Moorehead as field assistant. The parties are engaged in opening the mounds in Ohio and have made some remarkable discoveries—some of which are herewith presented.]

THERE is no valley richer in prehistoric remains than the Ohio. The Tennessee and Cumberland valleys, the Wabash, the Illinois, the Arkansas, and the western tributaries of the Mississippi traversing the states of Missouri and Arkansas contain many evidences of primitive man's occupation. But none of them excel southern Ohio either in the number of interesting objects and ornaments from the burial places and village sites, or in the extent and massiveness of the earthworks and fortifications. Southern Ohio in pre-Columbian times was the home of two mound-building tribes. Burial tumuli and camping sites dot the Miami and Scioto valleys in great profusion.

These powerful nations were recognized by surrounding clans, were feared by their enemies, and were sought by those needing assistance. Their travel and their commerce brought to them articles from a great distance. We have found in their graves and upon the ruins of their homes, obsidian from the west, seashells and fossil sharks' teeth from the pleasant shores of the Gulf and the Carolinas, mica from the Alleghanies, cannel coal from West Virginia, copper from Lake Superior, galena from the Northwest, and images and carvings so far beyond the abilities of the Ohio savage to produce that they must have come from powerful southern nations such as the Natchez, the Cliff Dwellers, and possibly the Aztecs.

During the past summer work has been projected in the interests of the World's Columbian Exposition in the Miami and Scioto valleys. Many skeletons were found in Warren County in the former valley and there were noted indications of several large villages comprising two or three thousands persons each. But it was not until the survey located in the Scioto Valley that discoveries of a very unusual character were made.

There is a large tributary of the Scioto River known as Paint Creek. It flows toward the east and its valley

Camp of the Archæologists

is filled with the evidences of primitive man's occupation. There is a smaller branch of this stream known as the North Fork of Paint Creek which flows toward the southeast and is also rich in remains of the same character. It was in the valley of the latter stream that the survey pitched their tents upon the farm of Mr. M. C. Hopewell, near Anderson Station in Ross County.

In 1820 the Worcester Historical Society published the first volume ever issued in the United States devoted entirely to archæological subjects. Its title was "Proceedings of the American Antiquarian Society." For this volume Mr. Caleb Atwater of Circleville, Ohio, prepared several papers. Considered in the light of modern science they are well nigh worthless, but as Atwater was the pioneer of American archæology and labored under great difficulties we will be very charitable and grant him our meed of praise for his honest endeavors. He briefly mentions a large enclosure upon the farm of a Mr. Clarke (the land now owned by Mr. Hopewell) and called particular attention to a large mound in the center of the enclosure which he states was thirty-five feet in height, four hundred feet in length, and two hundred feet in width. He made no excavations and his examination of the embankment and the mounds upon the Clarke farm was entirely external.

In 1844 there were two young men, the one a doctor, the other a politician, living in Chillicothe, Ohio. They became interested in the antiquities of their county and having some means of their own, they devoted several thousand dollars and a number of years patient investigation of the interesting remains which were spread everywhere about them. Their work was incorporated by the United States Government in the first volume of the Smithsonian Institution under the title of, "Ancient Monuments of the Mississippi Valley." It is almost needless to add that their names were Squier and Davis.

Their work, covering four hundred large pages, has been an inspiration, a guide, an encyclopedia, to students of more recent times. While many of their conclusions have been hastily drawn and much of their work imperfectly projected, yet we cannot but assign them a high place in American archæology.

To the shame of intelligent Americans, their valuable collection from the mounds and graves which they explored, was purchased by the British Museum and is now on exhibition in that branch of the institution known as the Blackmore Museum at South Kensington. Although the collection was lost to the American public the work of Squier and Davis attracted such general attention that several museums were founded — prominent among which stands the Smithsonian Institution, — and a systematic study of the American aborigines was begun.

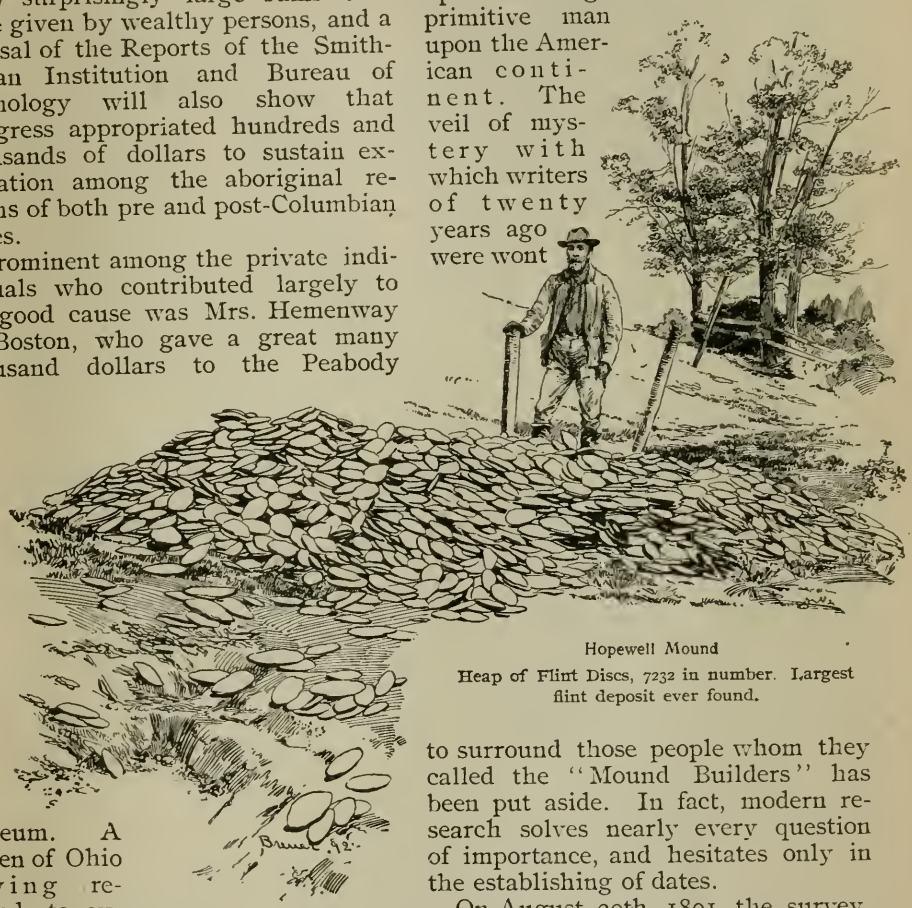
Between 1870 and 1880 a government institution, known as the Bureau of Ethnology, under the direction of the Smithsonian Institution, and the Peabody Museum of Harvard College sent a number of surveys throughout the west and in the Ohio Valley. The work accomplished by these surveys was considerable and of great importance. The stone graves of Tennessee, the Pueblos of the Southwest, the Indians of the plains and mountains and their customs and folk-lore, the mounds of the Mississippi Valley, the copper mines and effigy mounds of the Lake Superior region, and the tumuli of the South were extensively explored.

Toward the latter part of this decade Mr. Frank Cushing went among the Zuni Indians, learned their language, joined their secret orders, and obtained a wealth of information such as no white man ever possessed regarding the life of these strange romantic tribes.

This is but a brief summary but it will serve to call attention to the progress of archæological researches during the period named.

From 1880 to 1890 the interest was more general, and private individuals subscribed sums of money to sustain exploring expeditions to various parts of the country. Reference to the records of the Peabody Museum will show surprisingly large sums that were given by wealthy persons, and a perusal of the Reports of the Smithsonian Institution and Bureau of Ethnology will also show that Congress appropriated hundreds and thousands of dollars to sustain exploration among the aboriginal remains of both pre and post-Columbian times.

Prominent among the private individuals who contributed largely to the good cause was Mrs. Hemenway of Boston, who gave a great many thousand dollars to the Peabody Museum. A citizen of Ohio having resolved to explore the greatest earth-work in the United States, Fort Ancient (Warren County, Ohio), cheerfully employed $4,000 of his own money for this purpose.



Hopewell Mound

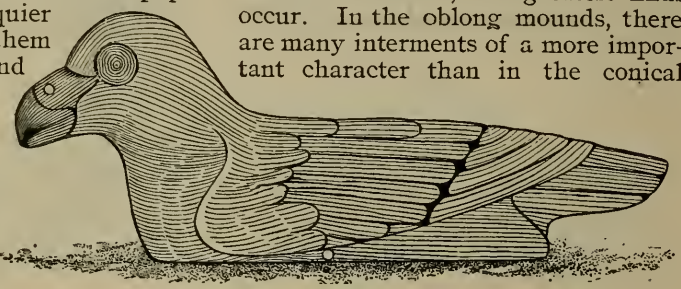
Heap of Flint Discs, 7232 in number. Largest flint deposit ever found.

This brings us up to the present time. The World's Columbian Exposition has thirty-one surveys in the field. Other institutions have enough to swell the number up to forty. The Peabody Museum has just sent an exploring party to Honduras. A New York weekly paper will send one through the Cliff Dwellers' region and Old Mexico. Thousands of skeletons have been dug up, dozens of earthworks surveyed, photographed and modeled in plaster-paris. A great flood of light has been thrown upon the origin and movements of primitive man upon the American continent. The veil of mystery with which writers of twenty years ago were wont to surround those people whom they called the "Mound Builders" has been put aside. In fact, modern research solves nearly every question of importance, and hesitates only in the establishing of dates.

On August 29th, 1891, the survey, of which the writer of this article had the honor to be in charge of, located upon the farm of Mr. Hopewell. Reference on the part of the reader to the map on page 26 of Squier and Davis volume, "Ancient Monuments of the Mississippi Valley," will give a fair idea of the extent of the enclosure. We confined our attentions entirely to the mounds and village sites of the place. No excavations were made in the fort wall itself.

There are twenty-six mounds situ-

ated upon the 111 acres enclosed by the embankment. They vary in size from 18 inches in height and 30 feet in diameter to a mound 23 feet in height, 500 feet in length and 213 feet in width. All the smaller ones yielded a greater or less number of skeletons, many interesting altars and other objects. Many of these skeletons were covered by singular copper ornaments, copper hatchets and such pendants as the savage liked to adorn himself with, namely, bear and panther teeth, beads, mica, copper and shell ornaments. Pipes were also found having the bowl placed upon a broad base. Several of these were large enough to hold a handful of tobacco. On account of their popular shape, Messrs. Squier and Davis called them "platform pipes," and this name has been perpetuated by recent explorers. Three of these are shown in one of the illustrations accompanying this article.

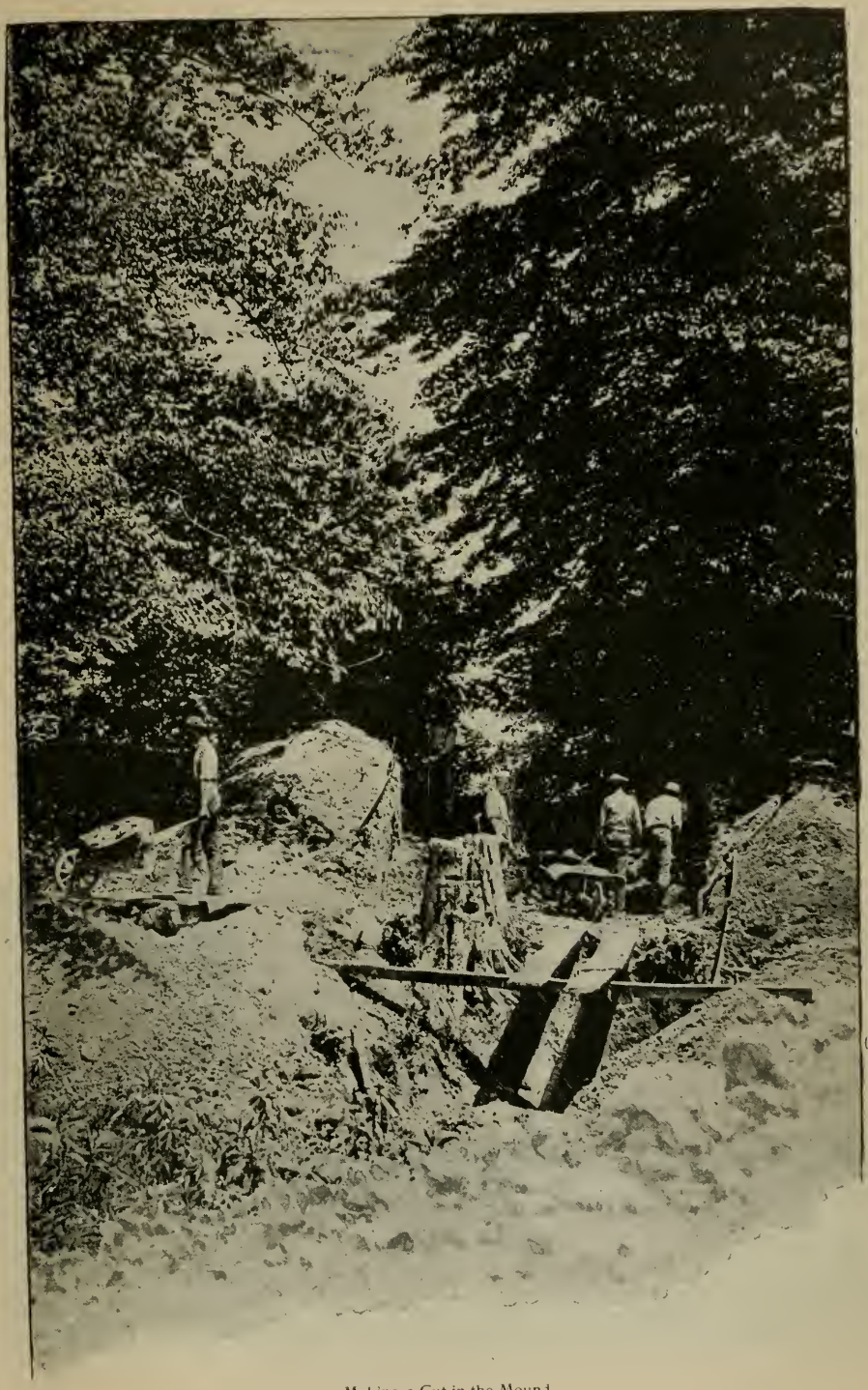


Effigy of a Bird

No single tumulus explored within the limits of the Mississippi Valley has yielded such a variety and wealth of archæological treasures as has the large structure near the center of the enclosure, which we designated the "Effigy Mound." It was called an effigy on account of its resemblance to the human trunk. Its greatest diameter is from the east toward the west. The eastern end is high and bold in outline, the western rather low. There are undulations on the top and projections toward the northern side resembling shoulders. The builders had added to the mound at six or seven different periods, hence the irregularities in its outline and its consequent resemblance to the human trunk. The center of the mound is higher, and well indicates, by its gradual swelling, the chest. A little beyond the chest the mound is narrowed to a diameter of 160 feet, and this would indicate the waist. We speak of the mound externally, of course, when we say that it is a likeness of the human trunk. Internally, it gives no evidence of having been constructed in portrayal of the human body. Its likeness to that form is therefore purely accidental, and we have established the term more for the sake of convenience than to convey the idea of an intended effigy.

Mounds may be divided into three classes. Those upon the high hills, which are unstratified, those in the broad, fertile bottoms which are conical in form, and being stratified, and the mounds found on the river terraces, oblong in shape. In the stratified mounds, the greatest finds occur. In the oblong mounds, there are many interments of a more important character than in the conical tumuli. The Effigy Mound was not conical, and it was therefore unusually rich. The stratification throughout it was pronounced. In any of the cuts, one could observe a layer of sand, and so on to the summit of the structure.

A burial mound of such great dimensions as the Effigy could not be explored by a continuous trench or one large excavation. We had to divide the structure into seven sections, each 60 feet in width. These cuts were run north and south across the shortest diameter of the mound. Teams and scrapers were employed to expedite the investigation, and each section was dug out by scraping until a point four feet from the base line was reached. The base line is the original floor or bottom of the mound. The teams were then moved



Making a Cut in the Mound

to another portion of the mound, and laborers with pick and shovel carefully examined the remaining four feet, beginning at the south end, on the base line, and working toward the north.

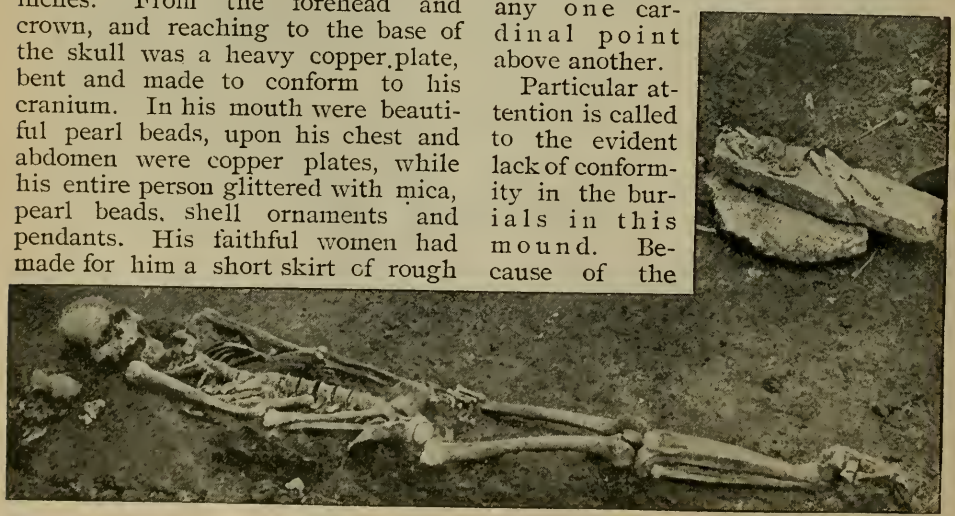
In erecting the structure, primitive man had cleared the ground of underbrush and bushes, built a fire upon it and burned it hard, placed the bodies of his distinguished dead upon the level floor thus attained, and heaped the mass of earth above. So, by keeping along the hard-burnt base line, excavating was rendered easy, and the positions of skeletons and objects located without difficulty.

Section Number One, or the first trench cut in the mound near the eastern end, contained nothing. Section Number Two exposed several skeletons, accompanied by some interesting implements.

Foremost among these was a large adult skeleton, five feet ten inches in length, whose head pointed toward the south. The men gave him the name of "The King of the Mound Builders," and although the name is more sensational than scientific, its implication may not be contrary to the truth. At his head were copper antlers twenty-two by twenty-three inches. From the forehead and crown, and reaching to the base of the skull was a heavy copper plate, bent and made to conform to his cranium. In his mouth were beautiful pearl beads, upon his chest and abdomen were copper plates, while his entire person glittered with mica, pearl beads, shell ornaments and pendants. His faithful women had made for him a short skirt of rough cloth, similar to coffee-sacking in texture, and where the copper had come in contact with it, it was very well preserved. Upon the ankles were strings of copper, spool-shaped objects and beads. Near his right shoulder was a large spear-head of agate. A pipe of fair workmanship rested near his jaws.

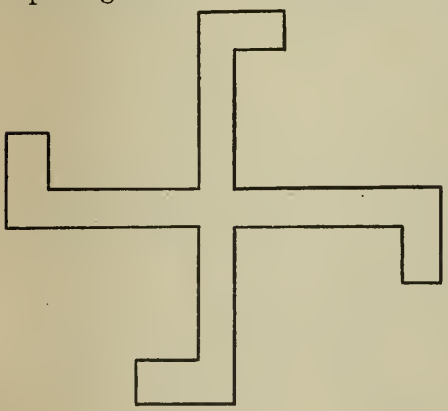
Section Number Three was by far the most important. In it were discovered three adult skeletons accompanied by many objects, a mass of singular designs in sheet copper, two skeletons covered by a large layer of copper, a clay altar filled with ceremonial and ornamental objects, and many skeletons with and without objects. The burials in cut No. 3 were made promiscuously, that is, the skeletons were not placed at certain distances from the center of the mound or from the altar, nor was there any regularity observed in the placing of objects about the remains. Mounds are frequently described as containing skeletons placed in a square or circle with the heads, in the case of a square, with each row pointed the same way. In all our mound exploration we have never found all the skeletons pointed in the same direction. There seems to be no preference for any one cardinal point above another.

Particular attention is called to the evident lack of conformity in the burials in this mound. Because of the



King of the Mound Builders

great richness of the structure we would assign it a prominent place among the tumuli, the contents of which have given us substantial information concerning the origin of the Ohio primitive man. If there ever was any intention on the part of the mound-building clans to exhibit their knowledge of geometry or artistic arrangement of the burial places, we would have supposed that such knowledge would have been made manifest in this structure. Bnt there is no evidence of an ability to make accurate measurements, nothing to indicate a uniform method in interring the dead. Even the most wonderful finds seem to have been carelessly heaped together.



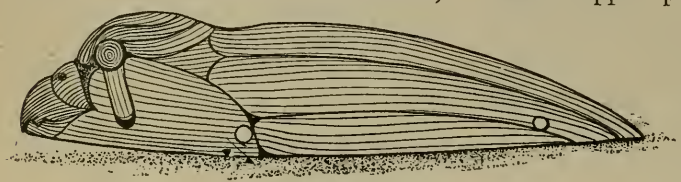
Swastika Cross

Beginning at the south end and proceeding toward the north in Cut No. 3, we found a deposit of copper several feet above the base line. There were 120 separate designs in this deposit, all of which had been wrought from sheet copper. They varied in size from two to three to seven by ten inches. In all our mound opening experience, nothing has ever been found which approached some of the designs occurring in this deposit in archæological value. There were several good likenesses of the Swastika cross. When the first one was picked up, we thought the resemblance of that famous religious emblem purely accidental, but as another and another were secured and inspected by our wondering eyes, we became convinced that the crosses were not conceived and manufactured by those ignorant of its symbolism. The form of the cross is familiar to many of our readers. A sketch of it is shown in the accompanying figure. Like the Greek cross, the arms are at right angles. Each arm is of the same length, but there are projections at the end of each, an inch or so in length, and these give the emblem its great significance.

The cross of the Hindoos, of the Phoenicians, the cross that the French anthropologists have found upon the pottery and in the tombs of aboriginal man all over Europe in an Ohio mound! Were these things found alone, we must conclude that their presence was due to the influence of the whites. But associated with them were fanciful designs such as fish, combs, eagles, scrolls, diamond-shaped stencils, and leaf-like designs. Not far removed from this deposit were vast quantities of obsidian implements, effigies of the bird, beaver and fish, all carved from stone or made of terra cotta. Some of these are shown in the illustrations. They are Southern in character and from the fine workmanship evinced in them, we feel confident in making our assertion that neither the Indian of post-Columbian times nor the French or English trader ever saw or heard of them, let alone making them. The white man gave the Indians of the Ohio Valley beads, tomahawks, iron kettles, wampum, medals, looking glasses, and knives. In short, he presented them with articles which would be of value. That he would give them bird, animal and fish effigies, and, above all, the Swastika cross, is preposterous. We make bold to say that there was not a trader or a pioneer that ever heard of the cross or knew of its use. The Swastika is so little known to-day that it is mentioned in but two encyclopedias, and aside from works of a religious or anthropological

character, one cannot find mention made of it.

The natives of Mexico employed obsidian in vast quantities, and were adepts in chipping it into desired forms. We refer particularly to the Aztecs. The Spanish chroniclers inform us that the Aztecs traded very extensively with Northern tribes, also, that the natives of the Gulf States traded shells, mica, fossil shark's teeth, for copper and fine flint implements. The effigies (the great number of which cannot be shown in this article)



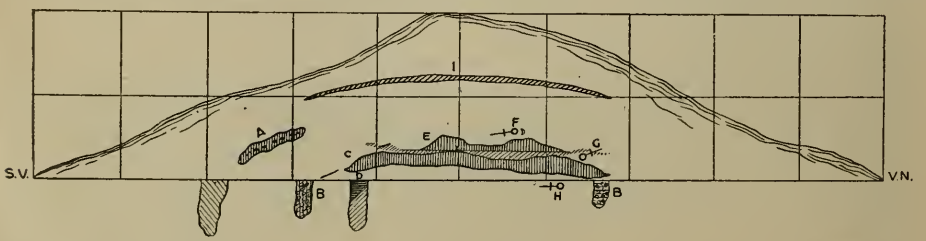
Effigy of a Bird from the Mound

represents Southern life, the obsidian Mexican and the Busycon and Pyrula shells North Carolina or Florida nations. Perhaps the Swastika was known to the Aztecs. Several crosses have been sculptured upon the temples and tablets of Mexico and Central America. It is, therefore, quite reasonable to conclude that the more Southern nations knew its use. The savage of the Ohio Valley did not and therefore placed it with a mass of copper, most of which was designed for ornamental use only.

The second deposit of copper lay fifteen feet north of the first and upon the base line of the mound. It covered two decayed skeletons. The objects were fairly well divided between copper plates and celts. The largest axe ever found in the United States, weighing thirty-eight pounds, twenty-two by five inches, lay near the western edge of the deposit. It is shown in the head-piece of this paper and will be readily recognized in the illustration. The other celts were smaller, some of them being but an inch in length, while the average weighed two pounds and were six by three inches.

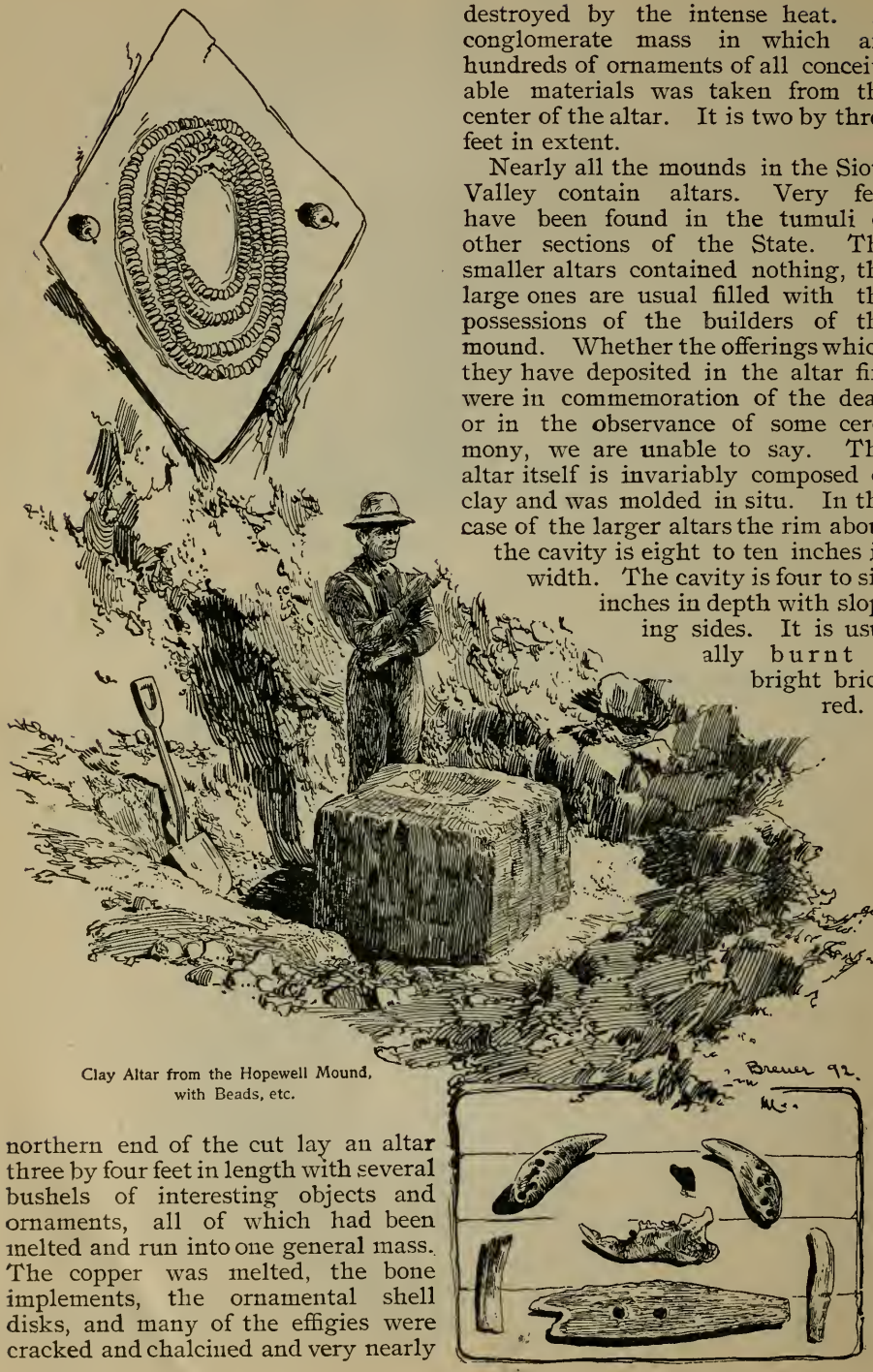
The copper plates were of nearly uniform size. The copper in them had originally been sheet and was undoubtedly hammered thin in a cold state. They varied from a sixth to a quarter of an inch in thickness, were eight or ten inches in length and six or seven inches wide. The corners were slightly rounded. Occasionally the plates were perforated for suspension.

Beneath the copper lay two badly decayed skeletons. Copper usually preserves anything it comes in contact with. Yet in spite of the great mass of metal above these skeletons their bones were almost dissolved into dust. The remains were so far from the surface, atmospheric agencies could not affect them. With so much copper over them, all conditions were favorable for their preservation. We are, therefore, convinced of the great antiquity of the mound. Near the



A Mass of burnt bone.
B Pits 3 feet deep filled with small stones.
C Burnt earth, very hard.
D Pit of fine black earth, with 6 inches of charcoal on top.
E Altar.
F Skeleton, with copper plate.
G " above clay, last of altar.
H " below clay, last of altar.
I Layer of bark.

In the Trenches



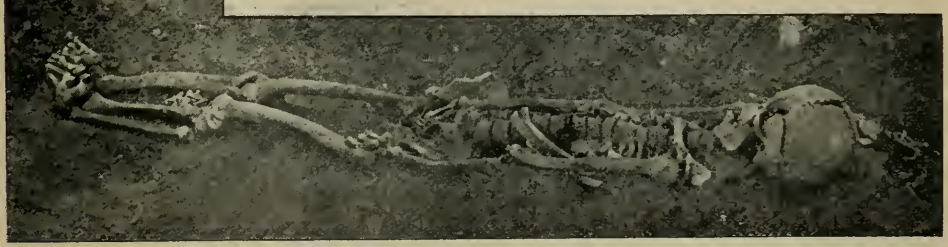
Clay Altar from the Hopewell Mound, with Beads, etc.

northern end of the cut lay an altar three by four feet in length with several bushels of interesting objects and ornaments, all of which had been melted and run into one general mass. The copper was melted, the bone implements, the ornamental shell disks, and many of the effigies were cracked and chalcined and very nearly destroyed by the intense heat. A conglomerate mass in which are hundreds of ornaments of all conceivable materials was taken from the center of the altar. It is two by three feet in extent.

Nearly all the mounds in the Sioto Valley contain altars. Very few have been found in the tumuli of other sections of the State. The smaller altars contained nothing, the large ones are usual filled with the possessions of the builders of the mound. Whether the offerings which they have deposited in the altar fire were in commemoration of the dead or in the observance of some ceremony, we are unable to say. The altar itself is invariably composed of clay and was molded in situ. In the case of the larger altars the rim about the cavity is eight to ten inches in width. The cavity is four to six inches in depth with sloping sides. It is usually burnt a bright brick red.

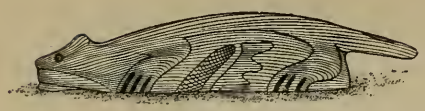
Cuts Nos. 4 and 5 contained many skeletons. There was nothing remarkable with any of them.

Cut No. 6 was almost as interesting as No. 3. There was a larger altar in this cut than in No. 3 and eight or ten times as many specimens in its cavity. Near the center of the cut were two skeletons over whose heads stones had been neatly arched. The skulls were preserved and we succeeded in removing them nearly entire, although the other bones of the body were badly decayed.



Our conclusion that the builders of the Effigy mound were acquainted with the Mexican civilization and cotemporaneous with mound-building period. There were hundreds of obsidian implements such as have been briefly mentioned above. Many of these were of the finest workmanship varying in length from six to ten inches and in width from three to five. Their edges were sharp and clearly defined. Barbs or shoulders for attachment of shafts have been chipped with unfaltering precision. Some of the obsidian had been worked into long and delicate knives. Many of these were slightly curved like a sickle, while others were double-edged and dagger-like. Thirty or forty were secured entire but the great majority had been cracked and broken by the heat of the fire which,

Stone Bowl from Hopewell Mound



as in the case of the first altar, was built upon the deposit. How unfortunate, that the builders resorted to this destroying element. How valuable to science would be these implements, effigies and ornaments, had they been deposited as were the two masses of copper.

There were pipes, large bear teeth, copper spool-shaped objects, thousands of beads, little statuettes resembling human and animal figures and many other things. One of the pipes represents a duck standing upon the back of a fish. The execution is admirable, all the parts of both being clearly defined. The hole for the stem runs through the mouth of the fish and the bowl is in the back of the duck. A carving three inches in length and an inch in thickness represented a human face. The right side is badly damaged, the left side and the crown is entire. The nose is long and almost abnormally large. The cheek bones are not high and the chin is receding. Copper brooches and buttons covered with silver, bone beads, delicate bone needles, sandstone tablets, and thousands of flint-flaked knives were taken from the deposit. All told the finds filled fifteen large boxes. This will give an idea of the magnitude of the find. After the taking out of the second altar there were no more important discoveries. The six great deposits of this mound places it ahead of any similar structure in the world in archæological importance. Any one of four of the six deposits would have amply paid for the expense and time necessary for the exploration.

In all of the archæological work projected in southern Ohio prior to the year 1891, no certain light had been thrown upon the origin of primitive man. Valuable discoveries, it is true, were made. Many facts were established. Theories were promulgated touching upon the southern or Mexican origin of the mound-building clans. No one found sufficient quantities of foreign substances to warrant the assertion that the man which it is our purpose to describe came from the south. The material in the Effigy mound is in our opinion conclusive evidence of his southern origin. A careful study of the enormous number of specimens and skeletons to be exhibited in Chicago in 1893 on the part of those who are skeptical will convince them of the truthfulness of the assertion. If the Ohio primitive man came not from the south how are we to account for the thousands of Mexican obsidian implements, effigies, representing southern life, sea-shells, mica and sharks' teeth, which have been taken from this burial place.

There are just as important enclosures and tumuli in the Ohio Valley to be explored. We feel assured that further examination of the territory will but support the conclusions derived from the contents of the Effigy mound.

EL CAÑON DE LA VIEJA.

By Don Arturo Bandini.

FIFTY miles northeast of the town of Oposura, in the State of Sonora, Mexico, lies the beautiful valley of Usabra. The Mexican hunters will solemnly tell you that it was once inhabited by Adam and Eve; in other words, that the Garden of Eden was located in this favored spot. Enchanting and inviting as this valley is, in it there is no house, farm, or cattle ranch; all is still and peaceful; the reason for this is, that just across the range are the hunting-grounds and villages of the Yaqui and Mayo Indians, two of the bravest and most warlike tribes in the Mexican republic.

Well may these Indians guard their grounds; for they fairly teem with game; deer, buros (the latter a species of warm-land elk that will dress as high as a thousand pounds), and antelope; here, also, is the haunt of the wild turkey, brush and mountain quail, pheasants and a great variety of other feathered game. For fur-bearing animals, there is the jaguar, or Mexican tiger, "tigrillos," wild-cats, red and silver foxes, etc. I could go on and enumerate a number of animals that are totally unknown in the United States.

The Usabra Valley is almost completely surrounded by high mountain ranges, whose summits seem to pierce the very skies. There is no grander sight than the effect of the sunrise on these mighty heights.

As the first rays strike the loftiest crests, behold, a dazzling illumination takes place, owing to the reflection of the light on their quartz-crowned tops; and, as the king of day mounts higher and higher, the golden shafts touch peak after peak, 'till all the lofty pinnacles seem tipped with fire.

The inhabitants of this bold and attractive country are in perfect accord with their surroundings. Here the aborigine is almost free from the vices that degrade his brethren who are brought in too close contact with our civilization. He is free from the wiles of the trader, and his potent but destructive fire-water, and holds his lands, not at the caprice of his Government, but by the right of might, and, what is still more binding, the right of untold years of previous occupation.

I could tell of many curious rites in connection with their festivals, rites both military and religious, which are always closely allied. These tribes were originally, and are still to some extent, fire worshipers, always regulating their war expeditions by certain omens, such as phases of the moon, heat of the sun, brightness of the stars, meteoric showers, etc.

There is something more which is worthy of mention regarding these people,—their dress. Deerskin, as with most American Indians, forms the principal material; but their ornaments are far more beautiful and rare than those of other tribes. The leather is so perfectly tanned that it is as soft as broadcloth. The garments of many of the principal men are embroidered from moccasin to war-bonnet with tiny shells of all shapes and colors; but the richest, most atrractive and striking of their costumes are those embroidered with humming-bird feathers. The ruby throat, the emerald, the golden and many other species of these little birds furnish their delicate and highly colored plumage for the ornamentation of these semi-savages. I leave the reader to imagine the appearance of a stately Indian chieftain clothed in such a garment.

Now that I have to some extent introduced the country and its inhabitants, I will proceed to relate an adventure that I had in this neighborhood, an adventure so odd, strange

and unexplainable that to this day I do not know whether it was a dream or a reality. If a nightmare it happened during daylight, and what is more curious other hunters have bestrode this quadruped in or about the same spot.

One beautiful December morning, two or three days before Christmas, my brother and a fellow-hunter named Regalado (this name translated into English means "exquisite gift") and myself were sitting on some logs in front of our camp conversing and wondering what our friends in civilization were doing,—whether they were thinking of us way out in the deserts, etc. I remember doing some tall thinking all to myself while looking upwards at the fleecy clouds as they slowly sailed across the blue sky and lodged against the sides of the giant peaks; heartily did I wish myself at home,—never dearer than when one is far away and dangers on all sides may prevent a return to that sacred spot. From these happy-sad longings I was aroused by the voice of Regalado saying, "*Ola compañero, despierta*" (say, comrades, wake up). We will take it for granted that our friends are solicitous about us, and that we are constantly in their thoughts; but let us think of ourselves now: day after to-morrow is *noche buena* (Christmas). "What do you say to our going up the mountain-side after some *chiguis* (wild turkeys)? You know that the *chiguis piñoneros* are the best. I tell you, Turito those *piñoneros* are smart; they live on *piñones* (pine nuts), so they are always fat and prime, *buenos* for Christmas. What do say? Shall we go?"

Though turkey-hunting was common enough with us, yet I gladly accepted the invitation in order to divert my mind from thoughts that were becoming oppressive. After seeing that our rifles, pistols and *machetes* (heavy knives for either defense or cutting our way through thick brush) were in good order we started. We had not gone far when my brother, who had stayed behind to take care of camp, sang out, "*Cuidado con la vieja, muchachos*" (look out for the hag, boys). I returned him some light answer; but I noticed that Regalado's face paled a little, and that he crossed himself. Having had at different times ocular proof that my companion was a man of dauntless courage, his actions on this occasion surprised me not a little. I had often heard of the dreaded hag of the Usabra, but had considered it a superstition, and consequently had paid no attention to the tale.

As I have already remarked, the Usabra Valley is surrounded by lofty mountains into whose very hearts run great cañons not like those of California, that ascend toward the ridges, but great gloomy box cañons that become deeper and darker as you go in. Toward the entrance of one of these gorges my now silent companion and I directed our steps. I tried by various ways to rouse Regalado into something of his usual liveliness, such as chaffing him about a certain *Señorita* in California, or speculating on *la vieja de Usabra*. At the name of his *Dulcinea* he would brighten up a little; but at the mention of the hag he would look around warily and whisper, *calla* (hush).

It was a tremendous cañon before whose mouth we now stood; perpendicular in places, running up a thousand or more feet of sheer wall. Huge rocks balancing on pebbles looked as if the least jar would launch them into space. In other parts the mountain-sides are clothed in black ironwood, mahogany, pine, oak and other somber woods. It is altogether an uncanny looking spot. If the gorge seemed dark and chilly at the entrance, what would it be deeper in? I called Regalado's attention to these facts.

"Yes," said he, "it looks very uninviting, but we are not going into that tomb; we are not on a prospecting tour, but hunting *chiguis*, and *chiguis* are not found at the bottoms of cañons, but on their sides, so come on."

Slowly and cautiously we began our climb; soon the giant trees shut out the

sunlight, and we were in a twilight gloom, nothing but the "chir chir" of the mountain cricket disturbed the oppressive silence.

Let the reader understand, that in these remote solitudes death threatens on all sides; nonpeds, bipeds, quadrupeds, centipeds and milipeds for that matter are always on the alert for the unwary and inexperienced. In these fastnesses lurks *el vaso* (the lights), so named on account of its similarity to that organ. This is unquestionably the most deadly of the American animals. I doubt if its equal exists in the known world. I have read most of the standard treatises on our poisonous animals and those of foreign lands, but, as far as I can judge, *el vaso* is far ahead of any of them in the virulence of its venom. When not concealed in its lair in some hollow trunk it haunts the springs where cattle and horses are accustomed to drink, and taking a position on some convenient limb, hangs bat-like to await its prey. Here is full scope for its agressiveness; silently it drops on the first drinker, a snort, a plunge, and the stricken animal staggers for a few feet, then drops. He has taken his last drink! Other victims follow; no noise is made by this destroyer: "quiet as death" is well illustrated in the work of *el vaso*. Fortunately for stockmen, this animal is not common; with a big reward in view for its destruction, the white and Indian hunters make it the special object of their hunts. A complete description of *el vaso* and its habits is given by Don Manuel Gustios in his book entitled "Animales Venenosos de México."

Even the vegetable kingdom bars your progress not only with its thorns and density but with numerous poisonous vines and creepers that seem to reach for you on all sides, and to touch which causes intense pain. Above all to be avoided, is the terrible *yerba mate* whose poisonous exhalations will cause insanity should you through ignorance use it for a couch and continually inhale its deadly gas. With all these pleasant prospects in view, we commenced our climb. Going up five or six hundred feet we arrived at the top of a knob that arose abruptly from the mountain-side; here we stopped to listen for the cry of the turkey.

Below us was a green sea of leaves swaying and undulating under the strong wind that came sweeping up the cañon. But, far above us was the grandest sight of all; there, two thousand feet or more directly over our heads, rising from the opposite side of the gorge, hung great rocks, black and menacing, though it was fully five hundred feet directly from where we stood to the other wall, yet had any of those boulders fallen from the very apex of this tremendous half arch it would have landed far behind us. That there was danger of this occurring we had evidence enough, as all around were rocks that had fallen from the height and buried themselves deep into the hard ground; others had dropped on trees and reduced them to splinters. Unpleasant possibilities would suggest themselves, but were suddenly driven from my mind by the distant "peek peek" of the turkeys. Following the sound, after more difficult ascending and descending, we arrived in the neighborhood of the game. These birds are exceedingly wary, and we had to approach them with the greatest caution. We could now hear the feeding "peeble peeble" of the hens with the "gobble gobble" of the cocks. At last peering through the brush we saw a sight always dear to the hunter's eye: in a little clearing perhaps two acres in extent was a large flock of turkeys, great magnificent cocks, strutting proudly about, now and then drooping their wings with a loud "thung." Each selecting one of the largest, we fired. With a loud whirr the flock flew away, but sufficient game remained for our bag.

"*Bien, muy bien*," said my companion, "now for a dozen *perdices*

(mountain quail) on our way back to camp and our larder is ready for *noche buena.*" "*Amigo,*" said I, "you shoot the *perdices* on your way back, I am going farther into the mountains and try to get a *cimarron* (mountain sheep). You know I need a pair of *chaparreras* (skin overalls tanned with the hair on, used for riding in the brush), and now is the time to get them. Tell my brother that I will be in camp before dark, so *adios.*" I was walking away when Regalado said: "How far do you intend to go, and on what side of the cañon will you return?" adding at the same time, that the side on which we now stood was the best. I told him my intention was to go on a mile or two farther and then return by the bed of the gorge, as the path there seemed smoother and certainly more even. "Choose any other way than the bottom of the cañon," he said earnestly, "avoid that path I beg you; if you do not you will surely regret it and forever spoil all the pleasures that we have had or may have hunting in the Usabra." "But, *compañero,*" I said, "what is all this mystery and terror about? I have often heard of the hag of the Usabra, but surely you don't believe the idle tale. Some prospectors have probably found a rich ledge in this locality, and, not being able to work it at present, have invented this yarn to keep others away. Come," I continued, "own up that there is really no foundation for the story, and that you do not know any one who ever saw the apparition."

"You are mistaken," he answered promptly. "I know some bold and truthful hunters who have seen the *vieja* in this cañon. But the day is waning; some other time I will tell you more. Before we part I beseech you again to keep out as much as possible from the bottom of the cañon; and more, if you should see *la vieja*, conceal yourself and remain quiet, but if she stops when near you and begins to sniff the air, as a hound when scenting, *tírale, y dí en el nombre de María.*" (Shoot at her, and say in the name of Mary.)

"*Bueno,*" I said, more impressed at his earnestness than I was willing to acknowledge. "I will do as you say, *amigo mio;* if the *vieja* passes me by, well and good; but, should she object to my scent, I will try the effect of a good Sharp's 45–110 on her anatomy!" Regalado looked shocked at my levity, but said nothing more, and we parted.

Generally I prefer to hunt alone. Hunting in pairs is as a rule bad policy; but after the departure of my comrade the gloom seemed to settle deeper, and the air grow colder in the great gorge, while the "chirp" of the crickets sounded louder and more lonely. Once I half made up my mind to follow my friend and return to camp. Was I afraid? I think not; but I felt inexpressibly lonesome. I have been in many places as far retired from the haunts of man, but never experienced such utter solitude as in the cañon of the Usabra. Shaking off, to some extent, this unpleasant feeling, I once more pursued my way up the cañon. I kept out of the wash as much as possible, but in some places could not avoid it, as the walls rose straight for hundreds of feet, often converging as if ready to topple and overwhelm me. Once or twice I obtained glimpses of mountain sheep, but out of reach, not of the rifle, but of a possible hit. The sight of the *cimarrones* drove all thoughts of Regalado and his cautions from my mind; and I pursued the hunt with renewed ardor.

Traveling now with extra caution and looking sharply on every side I advanced deeper and deeper into the mountains. At length, feeling considerably done up, I sat down to rest for a few minutes, and to think whether it might not be best to cross the cañon and hunt the game on that side, at the same time working my way towards camp, when, looking up, I saw a band of five *cimarrones*, led by a large ram, slowly winding down

the mountain-side, and heading towards where I was sitting. From the formation and lay of the land I knew that the sheep would pass within easy rifle shot—say two hundred yards. To any one who has ever hunted these animals it is needless to tell of their extreme shyness, keen scent and sharp sight. I knew that if I moved they would see me. There was nothing to do but to remain quiet, trusting that the color of my buckskin suit, which somewhat resembled in shade the surrounding rocks, would deceive at a distance even their quick sight. From the wind I had nothing to fear, as it was completely in my favor.

How stately the "bighorns" looked and with what decision they put down their forefeet when they walked. The leader, who was ten or fifteen feet in advance of the rest, I already looked upon as "my mutton." The big fellow would now and then pause, toss his great horns and try with his keen scent the purity of the air. But it was not against a human enemy that he was guarding his followers: the chances were that in these almost inaccessible solitudes he had never seen or even scented one of that species; his watchfulness was for the jaguar, the *tigrillo*, and mountain lion, all implacable enemies, and with whom he was a special favorite. The sheep had now arrived at good range; a few seconds more and they would be safe over the brow of the cañon; now was the time. I imitated the whine of the jaguar, "oo-ii-un." With a loud snort the band came to a dead halt, but only for a second,—time enough and to spare. At the crack of the rifle the leader reared, pawed the air once and then pitched head-foremost down to the bottom of the cliff. I sent two or three bullets singing after the rest just to see them give some of their wonderful leaps, but not with the intention of hurting them, for I had secured what I needed.

But now, to get at my game, there were two alternatives: to go down from where I stood, or go back at least two hard miles where the descent was comparatively easy. With the recklessness of the hunter I chose the first and most dangerous route. I proceeded to make my preparations accordingly. From my waist I unwound the light *riata*, or lariat as the Americans call it; which name by the way is incorrect. *Riata* is the word. *La* is the article the; thus *la riata* signifies *the riata*. Americanized lariat is the result. My *riata*, which was forty-five feet long, I took by the middle, and placing it over a stout bush lowered myself to a ledge some fifteen feet below; then, letting go one end of the rawhide, I pulled it down to me. This operation I repeated three or four times until I arrived at the last ledge, a platform of stone. From here it was fully forty feet to reach ground, from whence I could make the rest of the descent clinging to rocks and bushes. Fortunately in this place I found, jutting out from the face of the cliff, a horn-shaped rock that just answered my purpose; to it I made fast one end of the ever-useful *riata*, and going down hand-over-hand, helping myself by bracing against the rocky wall, soon reached better ground.

"Wah, big chief!" I said, but immediately collapsed when I saw my impromtu ladder dangling from the face of the precipice. I had been so anxious to make the final descent that it had not occurred to me that the other end of the *riata* would naturally remain fast above, and I should be compelled to abandon my faithful servant. Necessity is never more the mother of invention than in the life of a hunter or pioneer. A way out of the difficulty soon appeared. Lifting my rifle I took steady aim at the exposed part of the loop under the projecting rock and fired. *One* heavy bullet did the work: it cut the strands and down came my helpmate, mutilated a little it is true; but for the services it had rendered me I would splice the cut so carefully that no one could ever detect the break.

Gathering up all my belongings once more, I scrambled, slid and tumbled my way to the bottom of the gorge. There I found my *cimarron*, a splendid fellow. His great horns alone must have weighed ever twenty-five pounds; and his skin would make a handsome pair of *chaparreras*. Altogether I was well satisfied with the day's work. The sun, I imagined, had long since crossed the meridian, although in the deep cañon it was impossible to tell. Far up the mountain-side I could see through the depressions of the walls the sunlight resting soft and mellow against the giant peaks. How inexpressibly small I felt in that great rift; but I could lose no time moralizing; the *cimarron* had yet to be stripped of his skin and horns, and the shelter of camp regained before dark. I set to work at once, and being somewhat of an expert it did not take very long to finish the operation.

Tying up the skin and horns as compactly as possible, I started on my return to camp. Strange that as I picked up my bundle, and before I had made one step homeward, there came to my mind with startling distinctness Regalado's injunction, "Whatever path you may choose, I beg of you avoid the bottom of the cañon." Yet here I was about to take the very route against which I had been warned. But how could I do otherwise? Even when I should find a convenient spot to climb the mountain-side I would have to cut and push my way through the thick and thorny bush, and scramble up and down the numerous small but steep cañons that debouched into the main one. Hand free I could accomplish this; but with my heavy load it was out of the question. As far as could be seen from where I stood, the bottom of the wash was quite clear and infinitely easier to travel; so in spite of Regalado's advice this must be my path. After traveling a couple of miles hunger and fatigue began to tell; but the surroundings looked too gloomy and uninviting for a halt. I would have to keep on until I should find a spot less walled in and more congenial.

In this country continual watchfulness is the price of safety; with the knowledge of this constantly in mind I hurried my footsteps, at the same time keeping a sharp lookout on all sides. Yet I could not resist stopping now and then to take in more fully the ever-changing and awesome grandeur of the scenery. In places the sides of the cañon were exactly like walls straight up one or two thousand feet; in others they were terraced in inclined planes; on these terraces grew large trees of many varieties. Then again the mighty walls would be concave perhaps half way up, and then converge till the opposite sides were seemingly within a few feet of each other. Occasionally I cast furtive glances upwards at these menacing heights, and hurried again as fast as my heavy burden would permit.

At last I arrived at a spot that, compared with the ground I had left behind, looked more inviting for a resting-place. While the sides were still quite steep, yet they afforded some foothold; and the timber being less dense made the surroundings brighter. Here then was a good place to rest and break my fast. Selecting a little nook between two large bowlders I thankfully dropped my weighty bundle, unbuckled my belt with its heavy revolver and *machete*, and standing the rifle against one of the bowlders sat or rather dropped down on the white sand. I felt too tired to eat; but soon the feeling wore off, and I enjoyed my repast. This done, I went to the stream, bathed my head, face and hands, and returned once more to my nook to enjoy a smoke; in doing this I had resolved to take my time and make myself comfortable. Leaning back on the bowlder nearest me, and facing down the cañon I thought of the lines:

> Sublime tobacco, that from East to West
> Cheers the tar's labor and the Turkman's rest.

Smart fellow, I thought; he knew something. All this time my gaze was directed upward, where I could see gauzy clouds now and then sail across the narrow expanse of blue far over my head.

From this happy state of mind and body I was suddenly aroused by a sound half drone, half whistle, the like of which I had never heard before nor have I since. What could it mean? Almost instantly, however, some foreign intuition warned me to remain perfectly quiet, so strangely opposite to our general course to actively and instantly prepare for danger in this most hostile country. At first I could not locate the sound, but soon felt certain that it came from down the cañon, and more, that it was drawing nearer and nearer. At times it seemed all around me; the whole cañon was full of it. I remember some leaves lying near appeared to quiver and rise on their tips, as if attracted by a magnet. I was becoming confused, and felt that I was losing by degrees all sense of place and objects. By a supreme effort of will I rallied my failing senses, and determinedly fixed my eyes on the bend of the cañon, from behind which I was now sure came the sound, low at first, but expanding as it came, funnel-like, till it wrapped me completely in its charm. Nearer and nearer! The strain was now indescribable. Something must occur, and that speedily; and something did occur. Slowly around the bend appeared the gigantic form of a woman,—a gigantic hag rather. Like lightning came the thought *la bruja de Usabra* (the hag of Usabra).

Benumbed at the sight of such presence, yet a fascination I could not resist kept my sight riveted on that infernal substance or delusion. The great stature, the long skeleton arms bare to the shoulder, the gray, straggling hair, and the face,—the mummy-like face with profile of chin and nose that nearly met. Small space was there for a mouth between that nose and chin; yet from a dent there issued that whistling-droning chant. On and on came the terrible shape. At a short distance from me it stopped abruptly, and hound-like began to sniff the air. As if in a trance, Regalado's words came to my nearly paralyzed mind: "Keep perfectly still, and let her go by; but if she should stop near you, and begins to sniff the air like a hound when scenting, *tírale, y dí en el nombre de María.*"

The time had come; the great hag had stopped; slowly she turned her head, and the yellow topaz eyes glared into mine. I could not look long into those orbs and live. Suddenly I became aware that her strange all-powerful chant had ceased; and the spell that bound me was now broken. With a quick motion I seized my rifle. This time eye met eye over the polished barrel;—a report that within those narrow walls sounded like thunder went booming with stunning echoes up the cañon. Were those screams that intermingled? I could not tell; for suddenly I seemed to be in a vacuum. I remember springing to my feet, gasping for air; and then all was blank.

* * * *

When I recovered my senses complete darkness surrounded me; while far down the cañon I could hear the faint report of rifles. I knew that they were signals to guide me back to camp. Slowly and painfully I arose and began my staggering march down the gorge. I left everything behind,—rifle, pistols, all. At midnight I arrived at camp, broken in spirit and used up. Regalado would have plied me with a thousand questions; but my brother, more thoughtful, made him hold his peace till morning. I slept very little; and that night I often heard old Regalado murmur prayers and bless himself.

Next morning the bright sunshine flooding the whole valley made me feel nearly as comfortable as ever. When I told my companions the whole experience, the only consolation I received was a "*no te dije, no te dije*"

(didn't I tell you, didn't I tell you) from Regalado, and grim silence from my sometimes taciturn brother.

After a good camp breakfast my brother and I returned to the scene of my adventure. It wore a somewhat different aspect now, with company and the rays of the mid-day sun lighting up the defile. Priding ourselves on being expert trailers we made a critical examination of every nook and corner for a quarter of a mile up and down the cañon. No unusual sign rewarded the search; no other trail but that of animals could be found.

My rifle was there all safe, but the *cimarron* skin was gone. We knew well enough who took that away; jaguar tracks too plainly betrayed the thief! The horns and *riata* were exactly where I had placed them.

My brother now proposed to search for the bullet-mark. No trace of it could be seen; but the bullet we found flattened and lying on the sand in the middle of the wash. My brother picked up the lead, and turning it thoughtfully in his hand he said, "Enough, *vamonos;*" and we turned our backs on the spot forever.

REDWOOD INDUSTRIES OF CALIFORNIA

BY GEORGE D. GRAY

CALIFORNIA is pre-eminently a land of contradictions. Let a number of Californians who have resided exclusively in separate sections of the State, meet and relate their experiences, then describe the peculiarities of the locality from which they have come, and the uneducated hearer will undoubtedly come to the very same conclusion as the Eastern listener who had given patient attention to the stories of two of his California friends, which he expressed thus: "Well! Your stories are very contradictory, but one thing must be true: California has certainly the biggest prevaricators in the world."

One will tell you of level plains which extend as far as the eye can reach—so they do in San Joaquin Valley. Another will speak of mountains and valleys, "where the miles stand on end"—you can find them in the Yosemite. One will boast of orange and lemon groves, and all kinds of tropical plants that grow in luxuriance all the year round—Los Angeles, San Bernardino and San Diego have them. Another relates of snowstorms and drifts thirty and forty feet deep, and perpetual glaciers—so there are in Sierra County and the Mount Lyle country. San Bernardino County has a great river flowing underground, with no sign of a river-bed, while in San Diego you can see a river that is "all bed"—no sign of water in its dry channel for many months in the year; but dig down a little and you find it in abundance, and come to the conclusion that the stream is wrong side up. Sacramento Valley gives one a cloudless sky for many months at a time, while San Francisco furnishes fog thick enough "to be shoveled off the sidewalks." The store-keeper's notice might apply well to our State: "If you don't see what you want, ask for it and I'll bring it."

Now, the. Sequoia sempervirens, or, as it is usually called, "redwood," is a true Californian tree, and found nowhere else, and, like its native State, as many true and opposite descriptions and qualities can be given of the tree and wood as of our climate and the topography of the country. The butt will sink like a stone, while a log cut from the top of the tree will float like a cork. Other lumber will shrink in width—when dried in the open air, the shrinkage of redwood is very small. Lumber from this tree placed in the ground will last for years, while the lower or butt logs are considered the most durable. This quality of durability is admirably illustrated by the accompanying cut, which is taken from a photograph of the stump of a tree ten feet in diameter, whose roots have overgrown a log four feet in diameter. The material of the latter is as sound as the day some catastrophe laid it low. From some trees you can split out a board an inch thick, twelve inches wide and sixteen feet long, while in others it is so curved and mixed that it is almost impossible to split a log, or, if you succeed, the piece is so crooked that you must "tie it up to prevent its crawling away." Some is soft and admirably adapted for turning and carving, while that from other sections is hard, and for lasting qualities in the ground is unequaled by any other wood. Some lumber that is very heavy when cut will lose two-thirds of its weight in drying, while other trees will scarcely change in weight, if kept for years. Other woods, once dried, will swell when exposed to damp weather, while redwood, once

seasoned, is not affected, even though soaked in water. You can obtain samples of redwood of so light a shade as to remind you of Spanish cedar, or so dark as to resemble black walnut. You can have it with grain so straight that you think the lines in it must have been ruled by hand, or, if it suits your fancy better, you may select a piece which vies with French walnut, mahogany or rosewood in the

The heavy wood placed in the under-pinning of a house or for fence-posts lasts for many years. For railroad ties, it is used to the exclusion of all other timber on the Pacific Coast, the ordinary life of a redwood tie being from ten to twelve years, while a pine will hardly last four, or an oak six years. A roof covered with redwood shingles will last until the nails rust off. For

The Logging Train Coming Down

beauties of its curves and varieties of its figures. All other varieties of the cedar family, when once cut down, are destroyed, while the redwood stump will throw out a hundred green shoots, and cover itself all over with verdure and beauty.

Having spoken of the remarkable qualities of this wood, it may also be interesting to the reader to enumerate some of the purposes to which it is peculiarly adapted.

outside or inside house finish, the ease with which it is worked into brackets and mouldings, and the quality of never swelling or shrinking when once dried, causes it to stand without a rival, while its great variety of color and grain and its susceptibility of receiving a high finish, bring it into great favor with those who desire novel effects in interior decorations.

Containing no pitch or resin, it does not burn with the readiness or heat of

pine, and is more easily extinguished, an important quality which insurance companies have recognized in fixing the rates of insurance. There is in Humboldt County a "fireproof" warehouse built of heavy redwood plank, also a theater now building which is being protected from surrounding buildings in the same manner. For fermenting wine tanks it is far superior to pine or any other wood. The insect which frequently troubles wine-makers by boring through the tank staves never troubles redwood. In tanneries, the warm solution which so quickly destroys other vats, seems

Asleep in a Redwood

to have no effect on this timber. There are vats now in San Francisco which have been in use forty years. But to enumerate all the uses to which this unique wood is adapted, would require more space than the editor will allow, and might prove a trial to the patience of the reader. I will therefore leave this portion of my subject and turn to the home of the Sequoia sempervirens, and methods of preparing it for market.

The whole body of this timber in the world, is confined to the region between the 37th and 42d parallels north latitude, or between Monterey Bay on the south and Crescent City on the north, an extent of country about 400 miles long. The width is irregular, following the conformation of the mountains, but will average about 20 miles.

The whole belt of redwood lies upon the western slope of the Coast Range. Throughout the section named the rains are heavy in winter, and the fogs dense in summer, coming in from the ocean regularly with the wind every afternoon, and the climate during the whole year is mild and even in temperature. The redwood has been called the "child of the fog," and where the ocean moisture ceases the redwood disappears.

I would not imply that the section named is one vast forest. These were the original boundaries of the redwood belt. In Santa Cruz County there is still considerable standing timber, but north of there until you reach the Russian River most of the country has been stripped. Between the mouth of Russian River and Crescent City on the north there are large tracts of fine farming land, extensive sheep and cattle ranges as well as large sections which have been denuded of their native timber. Dr.

Kellogg, in his "Forest Trees of California," says that "probably from a fair estimate of the timber (redwood) along our coast it would not comprise more than three thousand square miles of forest land."

The amount of timber now standing has been variously estimated, rating all the way from 25,000,000,000 to 100,000,000,000 feet board measure. While in some sections the land will not yield more than from ten to fifteen thousand feet per acre, there are others which will yield 250,000 or even 500,000 feet, so it will be seen how difficult it is to figure the total closely. In some sections it requires a whole tree to make a telegraph pole (12x12 at butt by 30 feet long,) while in others a single tree has been cut which scaled in saw-logs 66,500 feet. There are trees standing though that will make over 100,000 feet each. While there are occasional large trees in Santa Cruz County as a rule they are small, and the average size increases as one goes north, the largest growth being found at the northern end of the belt in Humboldt County. The quality of the wood also improves in the same direction. In Santa Cruz County most of the timber is hard and flinty, a characteristic most desirable for its lasting qualities, when wanted for foundations of buildings and bridges, fence-posts, telegraph-poles, etc., but not as desirable for house finish and the finer purposes for which redwood is so much used, as is the product of Mendocino and Humboldt counties. In the forests of the latter counties it is not at all uncommon for the lumber sawn by the mill to average sixty to seventy per cent sound and clear, without knots or shakes, light and soft and

Hauling to the Mills

of the finest texture, nor is it difficult to obtain planks of strictly clear lumber, six inches thick, five or six feet wide and twelve to twenty feet long. A plank, which was recently hewn out in Humboldt County for the Columbian Exhibition at Chicago, measures five inches thick, sixteen feet five inches wide, and twelve feet nine inches long, and contains 1,046 feet of lumber. I speak of these large trees, but would not give the impression that this is the prevailing size. While such productions are not rare, the average diameter of saw-logs is from four to eight feet, and most of the mills on the coast are built with reference to handling timber of this size. Throughout the redwood belt, there is but little other timber—some pine, fir and spruce is cut, but no great amount of either.

A Giant Redwood Growing over a Fallen Log

Of course, the general modes in use in different lumbering sections are the same the world over, but in handling the large redwood logs, the nature of the wood and size of the timber call for certain appliances specially adapted thereto.

When the trees extending over quite a section have been fallen, the bark, which is very thick, is stripped off, and a fire is run over the ground to burn the rubbish and undergrowth of brush. Such a proceeding would be quite disastrous in a pine country; but since redwood contains no pitch or resin, and the green timber contains so much sap, the good logs which are lying on the ground are rarely affected by the fire. The ground having been cleared, then begins the real labor of getting out the timber. For handling these monsters, no ordinary road will answer. It must be wide and smooth

In the Redwood Forest

as a turnpike, all rocks and roots must be carefully removed, all hollows and gullies filled up. If the ground is level or soft, skids must be laid down to reduce the friction and prevent the logs digging into the ground as they are being hauled along, for no wheeled vehicle of any kind is used in transporting the logs in the woods; they are simply "snaked" along over the ground. With the road built, then follows the task of rolling the logs into it. For this purpose, a portable steam engine is now generally used. The machine is known as "Dolbeer's Steam Logging Machine." It consists of an upright boiler and engine, somewhat similar to a portable hoisting engine, except that instead of a reel to wind the rope on, it has a "gypsy head," similar to a capstan on board a ship. It is placed on a strong frame, the sides of which are like sled runners. To move the machine around in the woods, a line is run ahead and made fast to a tree or stump, then two or three turns are taken round the "gypsy," the engine is started up, and the "gypsy" winding in the rope, the machine hauls itself in any direction wanted. When in place, it is made fast to a tree or stump, and a line run to the log that is to be removed, and by means of snatch-blocks, it is hauled in any direction desired. As the machine has about twenty-five horse-power, the work can be done much cheaper and quicker than by oxen or horses. Once in the road, the cattle are needed. Several logs are fastened together to make a "train," and hauled to the railroad to be loaded on the cars, or to the stream to be floated to the mill. To handle a team of eight or ten yoke of oxen in front of a train of logs requires a teamster of more than ordinary ability. The best teamsters command a salary of $150 to $180 per month. The "train" once started, there must be no stopping if it can be avoided. It is a great sight to look at one of these "trains" started up and moving. Here are ten yoke of great oxen, and behind them the "train" of ten to fifteen great logs, of all sizes from four to ten feet in diameter, fastened with strong "dogs" and chains, one behind the other. All is ready. At first, the driver walks up and down the length of his team, speaking softly to this or that one by name, and gently spurring up the lazy ones with his stick, until he sees that every animal is bearing equally on the yoke. Now for it! He shouts and yells, curses and swears, calls every animal by name, and consigns every individual one—hoof, horns and hide—to all the torments mentioned in Dante's "Inferno"—shouts again, and wishes he was skilled in six languages, that he might give more variety to his vituperations, while amid the din and uproar every beast strains himself to the utmost. See, it moves!

Alongside, up and down the long line of logs hastens the "water packer," filling his pail from barrels of water standing on the roadside, dashing some of it under this or that log to reduce the friction. Over this level ground, once started, it runs smoothly, but now they come to a steep pitch in the road, the logs begin to slide, and faster and faster as each new log comes to the top of the incline and begins its descent; but the driver is on the alert, and at a signal from him the whole team breaks into a wild run. It is a grand sight, twenty great oxen tearing down hill, while just behind them come ten to fifteen great logs thundering after. It is a run for life or death. Should the leaders lag it means death to those behind; should an animal stumble and fall, it may be the cause of killing half the team. Away they go and for a few moments it seems a question whether team or train will reach the level ground first; but the road is well built and the driver has his team well in hand, and now at the bottom of the steep pitch, they gradually "slow up," they lean against their yokes, and so they go,

Redwood Gulch

until the logs are safely landed at the railroad or the river. The loads hauled are sometimes enormous. A train of seven logs hauled in Humboldt County in 1878 by A. A. Marks, teamster, scaled collectively 22,500 feet board measure of merchantable lumber.

The redwood mills are generally up to the times, and are quite ready to adopt all the latest improvements in saws, edgers, trimmers and planers. Until during the last few years, double circular saws were generally used to reduce the logs to lumber, but lately the band saw is rapidly supplanting the circulars. The circular saws are usually about sixty to sixty-four inches in diameter, and are hung one above the other; one cutting from the bottom of the log and the other from the top, the saw kerfs meeting in the center of the log, thus enabling the mill to cut plank four and one-half to five feet in width. But for logs of larger diameter there is used what is called the "Evan's Third Saw." This is a saw hung on a horizontal shaft above the other saws and cuts down from the top of the log to a little below the arbor or shaft of the middle saw. While of course its kerf is kept parallel to the lower saws, its cut is made four inches further out into the log. Besides this saw there is a fourth saw, which is hung on a perpendicular arbor, and makes a horizontal cut into the log just at the bottom of the cut made by the third saw. The effect of running these two saws is to rabbet out a piece extending from the top of the log to a little below the collar or the middle saw. Mills thus arranged can, by "turning down," saw logs eight feet in diameter, but logs of larger size must be split.

As previously stated, the redwood belt is located on the coast of the Pacific Ocean, and between it and the interior of the State of California lies the Coast Range; for this reason the railroad touches it at only one or two points and almost the entire product is transported by water. Both steam and sailing vessels are used for this purpose, and the capital employed in the lumber carrying trade is a very important factor in the commercial interests of our State.

There are about 40 mills engaged in cutting redwood, the largest having a capacity of 75,000 to 80,000 per day. Perhaps the average capacity of them all would be about 50,000 feet per day.

There was manufactured and shipped from the redwood mills in Mendocino and Humboldt counties during the year 1891, about 230,000,000 feet. Of this about 12,000,000 went to foreign countries, while the balance, 218,000,000, were consumed in the States on the Pacific, or shipped to interior States.

It seems eminently proper that mention should be made of some of the more prominent firms and corporations whose energy and capital have been enlisted to create and foster this great industry. Among such the writer would name the following: The Excelsior Redwood Company, C. A. Hooper & Co., San Francisco agents whose mills are situated at Eureka, Humboldt County, having an output of 24,000,000 feet during the past year, a considerable quantity of which is shipped to Eastern and foreign ports; the Fort Bragg Redwood Co., whose mills are at Fort Bragg, Mendocino County, and having yards under the name of the Union Lumber Co. in San Francisco. Their mills have a capacity of 20,000,000 feet per year, and they deal largely in ties and piles.

The Pacific Lumber Co., Allan A. Curtis, President, have their mills at Scotia, Humboldt County, with a capacity for cutting 20,000,000 feet of lumber and 50,000,000 shingles annually, a part of which is shipped foreign.

The Dolbeer & Carson Mill is located at Eureka, Humboldt County, and can cut 18,000,000 feet of lumber and 25,000,000 shingles yearly.

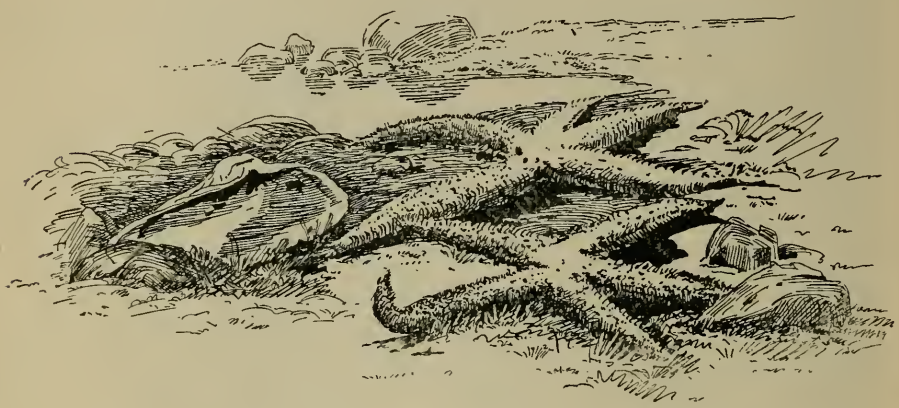
The Milford Land and Lumber Co., G. D. Gray, agent, San Francisco, whose mills lie on Humboldt Bay, Humboldt County, have an output of 8,000,000 feet per year.

The Humboldt Mill & Lumber Co., F. Korbel, President, have their mills on Mad River, Humboldt County, with a capacity for cutting about 16,000,000 feet annually; they also have connected with the mill one of the most complete outfits on the Pacific Coast for manufacturing redwood tanks.

The Albion Lumber Co.'s, W. J. Reed, President, mills are built at Albion, Mendocino County, and will shortly have a plant capable of cutting 15,000 feet per year.

C. L. Dingley & Co., of San Francisco, own a quarter interest in the Gilalala Mill Co., and are also agents for the De Haven Lumber Co. besides having lumber yards in San Francisco.

In addition to these, there are a number of other concerns having mills in Humboldt and Mendocino counties of almost as much importance.



ALONE

CHARLES KIELY SHETTERLY

Alone we tread life's devious pathways, sent
We know not whence, across our toilsome way,
Folded around in mists, uncertain, gray,
Shadows of hope and fear together blent.
Anon, the dull, thick clouds apart are rent,
Love wakens, and makes glad the passing hours;
The way leads onward o'er upspringing flowers,
And past brooks, murm'ring of a sweet content.
Yet, as we clasp and think this joy our own,
It fades—again in solitude we stand,
Watching the light wane o'er a darkening land;
The winds sob round us with a wailing moan,
When, all unlooked for, with a grim, firm hand,
Death opes the gate, and we pass out—alone.

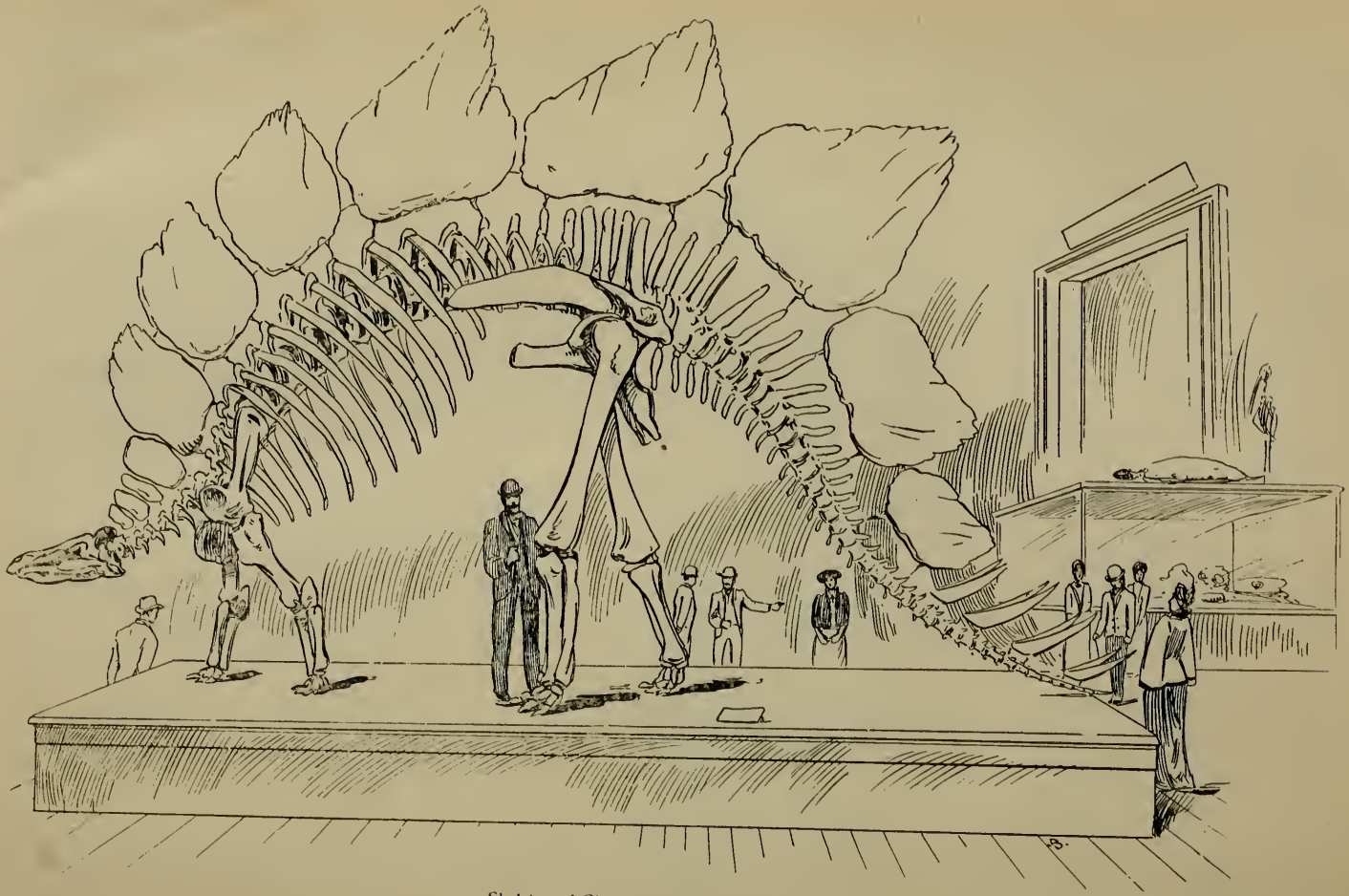
SOME EXTINCT GIANTS

BY JAMES ERWIN CULVER

THE romancers of the past centuries, Pontoppidan and others, who created the Kraken and various fabled monsters, would, if they could look in upon the collections of the National Museum and Yale College, have reason to believe that they were not so far out of the way in their conceptions, and that the actual productions of nature really outrival all the creations of the most vivid imagination. For a number of years, collections have been made of the gigantic forms that once peopled Western North America — huge lizard-like creatures, veritable sea serpents mounted on legs or flippers, and now they are being mounted at the National Museum, to the astonishment and wonder of the unscientific public. Some of these monsters are found intact so far as the skeletons are concerned. Others are known only by their tracks—huge footprints literally upon the sands of time.

In the Connecticut Valley, some of the most interesting footprints have been discovered, the quarrymen opening up slabs upon which are the imprints of gigantic bird-like feet, formed millions of years ago. These slabs, some of which are ten or twenty feet in length, are the leaves of the book of nature, which can be read by the geologist with ease. Imagine a pond of today with muddy shores. As we sit in the rushes, we see the water birds running along the beach, leaving the delicate imprints of their feet. Here a frog leaps along, then glistening in the sun is a snail forming a trail; again an insect, with its erratic track; a passing rainstorm, leaves the imprint of its pathway in the soft mud. Even the wind tells its story by the little ridges or furrows which the waves pile up. Suppose that the water in this pond should be drained off in some way, and day after day the shore containing these telltales should be baked in the summer sun. What would be the result? The mud would turn to stone, making the footprints, the raindrops, the ripple marks, enduring monuments of this day's work. This is what occurred in Kansas, Montana and other Western States millions of years ago. A large inland sea existed there, extending in early days from the Gulf of Mexico, and losing itself to the northwest. In later times it was, owing to the rising of the land, a shallow inland sea, in which lived the giants which constitute the subject of this article. They were monsters in all the term implies. Aquatic giants that swam in the heated waters, dragged themselves along over the muddy beaches, leaving their footprints in the sands, while their huge skeletons are buried in the stony mud of the ancient sea beaches, to be uncovered by the scientists of the nineteenth century.

The appearance of these early inhabitants and their size is almost beyond comprehension. It was a time of weird shapes—dragons, with all but the fiery breath; sea serpents one hundred feet in length; whale-like monsters that crawled along in shallow waters; uncouth reptiles with gigantic bodies and small heads, helpless and harmless; others with enormous jaws lined with sharp fangs; birds with teeth and no wings; flying monsters with leathery wings twenty-two feet across; others with slender tails, the end broadened into a paddle-shaped stucture; lizards thirty, forty or more feet in length crawling through the mud, now standing on their hind legs, or anon bathing in the warm waters in search of prey. Such were some of the giants that formerly lived in North America

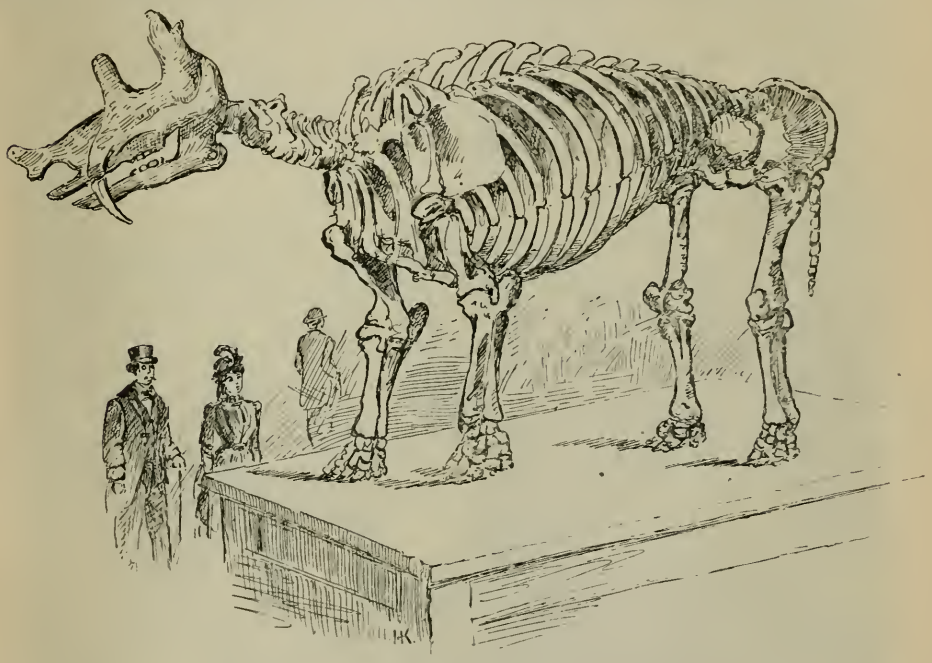


Skeleton of Gigantic Reptile with Bony Frill

in the old days, and made up what is called its fauna.

While to-day we laugh at the stories of the sea serpent as an impossibility, this creature in gigantic shape and of frightful appearance was one of the common forms of this time, and in some of the Western States, as Kansas, the skeletons of the monsters have been seen, ten within a small area, reaching away from sixty to nearly a hundred feet in length, telling a marvellous story of their former size and power.

Imagine a kangaroo, thirty feet long, its back studded with enormous spines, some *four feet across*, its tail covered with a double row of sharp spines. Cover the entire body with a coat of mail, arm the mouth with a bony beak, and some conception of this huge beast may be obtained. Its hind legs were much longer than the front ones so that it could raise up and rest on these and its tail as pillars of support. Its head was wonderfully small, the most diminutive in propor-



Skeleton of Agathaumas

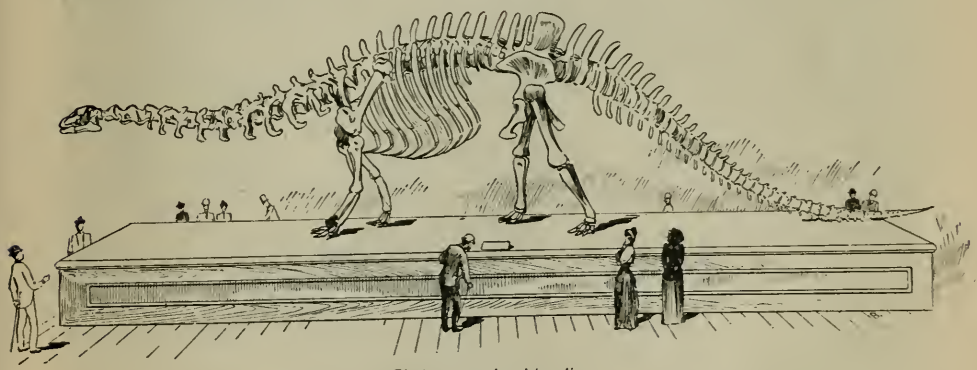
Whether man existed at this early day, we know not. There is no evidence that he did, a Tertiary man being hardly admitted, and in the accompanying pictures, the human figures are introduced more to show the size of the giants that were then in all probability masters of the situation. One of the most astonishing is shown in the accompanying illustrations, clothed in the flesh, as it may have appeared, while the outline shows the skeleton now in the Smithsonian. So weird a creature would hardly be conceived.

tion to the size of the body known, while, wonder of wonders, it had what scientific men consider a second brain in its pelvis, an expansion of the spinal cord, forming an object or second brain, nearly ten times as large as the brain proper. When the *Hypsirhophus* was attacked, few creatures could make so vigorous a defense. A single blow of the long tail would drive the double row of bony bayonets through the enemy, while the enormous spines added not a little in repelling an attack. The bones of this giant were

Restoration of Hypsirhophus

found imbedded in the rocks of Colorado, where it died millions of years ago, and became buried in the mud of the ancient lake.

Equally remarkable is the *Plesiosaurus* and the *Ichthyosaurus*, the former a veritable sea serpent, thirty or forty feet long, with four paddles, a long, snake-like neck and head; while the latter has a huge whale-like body, with a head resembling that of an alligator. The sight presented by these monsters swimming about in a shallow lake, must have been a remarkable one. Here and there the long necks could be seen rising above the surface, working like snakes, twisting this way and that, now disappearing beneath the waves, able to form some definite idea of the appearance of an animal from its bones, and noting the extraordinary frill of bone which extends backward six feet from the head of the *Agathaumas*, we can realize the enormous mass of muscles which must have been required to hold up the giant's head, and which made its neck of great dimensions. The *Agathaumas* was higher than Jumbo and longer than two Jumbos, placed in a row, and besides the horns as a defense, it was covered with a protective armor which rendered it safe from the other predatory animals of the time, as it must be remembered that in this early day, every animal had its enemy—one preyed upon another.



Skeleton of Amphicoelias

followed perhaps by forms more wonderful still.

Another of these animals shown in the present article, which has recently been placed in the National Museum, is the *Agathaumas*. Note its gigantic head and its comparatively small body. What animal of to-day possesses so strange a proportion? It resembles to some extent a rhinoceros, but in life bore little resemblance to this creature. The animal was twenty-five or thirty feet in length, its head being armed with three horns—two, each three feet in length, extending from the forehead, while another, sharp and dangerous, was perched upon the nose, which was further protected by a hard cutting beak. Scientists are

If men lived in those days, they were cave dwellers living in the rocks, garbed in skins, defending themselves, if necessary, with stone clubs and hammers. But what could their weapons avail against the giant *Amphicoelias* that crawled slowly and heavily out of the water in the direction of their homes, a mountain of flesh, weighing possibly twenty tons, four or five feet taller than the tallest elephant, and dragging along sixty or seventy feet of flesh? What could such an animal be? A long neck, a snake in itself, a tail like that of a crocodile, with a huge body, the hind limbs longer than the fore ones, suggesting that possibly the giant could rear himself aloft. As it marched slowly along, it dragged its

Restoration of Amphicœlias

huge tail, and its weighty feet sank deep into the beach, making footprints in the sand, which the reader may examine in the National Museum, footprints, each of which covers a square yard of surface. The writer has stood by the thigh bone of this giant as it rested on a shelf, and the bone was the longest, and four men were required to place it in position. The appearance of this strange nondescript reptile was marvellous indeed. A slow-moving, stupid creature, with head and mouth so small that it was to all intents and purposes, helpless, relying upon its gigantic shape to terrify its enemies.

A cousin to the *Amphicoelias* was the *Atlantosaurus*, a giant that undoubtedly attained the length of the largest whale of to-day, over one hundred feet, a sea serpent with enormous limbs, the thigh bone being seven feet in length, its legs being pedestals for support rather than for locomotion, and in the water anchoring it to the bottom. This monster is the largest land animal yet discovered.

This time was the day of the sea serpent in all the term implies, gigantic crawling lizards mosasaurs, fifty, sixty, eighty feet long, abounding everywhere, playing havoc with the smaller forms. There was the buoyant *Camarasaurus*, seventy-five feet long, a snake in appearance, with long legs, floating or wading along, buoyed up by the curious air cells in its back bone. Among the remarkable animals of the time was a leaping lizard, the *Laelaps* that stood twenty-five feet high and could cover nearly one hundred feet at a bound. To render it light, its bones were hollow; sharp teeth and claws made it a formidable beast. Even the massive *Hypsirhophus* had an enemy in the agile *Creosauratrox* —that was provided with a sharp claw on its hind feet with which it could rip and tear the small-headed monster. Fish lizards, sea serpents, monsters in shape and form, made up the strange inhabitants of these days, when America was rising from the waters. Kansas and other States were covered by an inland sea, on the shores of which roamed land animals as weird and wonderful as the strange lizards and sea serpents which populated the waters.

SHOULD TEACHERS BE PENSIONED?

BY MRS. E. S. LOUD

WHEN the subject of pensioning teachers is first brought forward the momentary impulse in the minds of many seems to be one of opposition. But when we examine the educational systems of other civilized nations, we find that in most countries where public instruction is treated as a State service, the policy of giving pensions to superannuated teachers, is recognized and followed.

In Prussia, the largest of the German States, were laid the foundations of a public school system, which improved upon and consistently worked out has served in many respects as a model for other nations.

From the outset, the German States have taken it for granted that in order to make their school system efficient and productive of the best results, they must make teaching a career sufficiently attractive to induce persons of ability and culture to take it up as a life work. Hence we find that the teacher's profession in Germany is considered as honorable as that of the clergy, law or medicine, is of life tenure and not only does he receive a pension when superannuated, but his pension, or a part of it at least, may at his death be continued to his wife and children. He is also provided with a residence, and generally fuel and light free. If it be urged that salaries are lower than in America, so also are the rates of compensation paid for all kinds of labor. But the cost of living is much less, and in proportion, it has been demonstrated that German teachers receive relatively as much salary as the average paid to American teachers, while those in large cities or occupying high position often receive more. We do not find the German school teacher emigrating to the United States to better his condition, although many other classes of Germans come here in great numbers.

In Holland, Belgium, Denmark, Austria, the Argentine Republic, Greece, Brazil, Hungary, Italy, Portugal, Sweden, Norway, Australia, Finland and Ontario, the educational system provides for pensions. Many of the cantons of Switzerland give pensions to their teachers. In Spain, the teacher is pensioned at sixty years of age, and the right to a pension extends to his widow and children.

In June 1853, the civil pension law of France was extended to include teachers and still remains in force. In Bavaria, the annual pension amounts to 70 per cent of the annual salary after ten years of service, 80 per cent after twenty-five years of service, 90 per cent after forty years of service, and the full salary after fifty years of service. In Hessen, 50 per cent of the salary after ten years of service, 72½ per cent after twenty-five years, 90 per cent after forty years of service. In Saxony, 33⅓ per cent after ten years of service, 41½ per cent after twenty-five years, 70 per cent after forty years of service.

Great Britain alone, whose public school system is of recent origin, has as yet no settled pension law although a specified sum is voted annually for pensions, donations or special gratuities to teachers. The government however has shown itself favorable to the measure and a bill now before Parliament is strongly supported by the press and other able advocates.

America's proudest boast is her public school system. To carry out that system the State establishes free schools in every community and thus virtually monopolizes the educational field. Where free education is offered by the State, the greater number of

parents, both from choice and necessity, accept its provisions, and the majority of those who wish to teach must do so in the public schools of the State.

All other branches of business are open to competition and the ambitious man or woman who possesses ability and enterprise may hope to win wealth or fame. Public school teaching alone is removed from this competitive field and this is one consideration that places the teacher who has given the best part of his life to the work of public education in a different attitude towards the government from members of other professions and callings.

The salaries of those who fill the highest positions in the department are not large when compared with the best salaries of similar positions in business houses, and the openings are too few in number for the great majority of teachers ever to hope to attain to them.

There are many demands upon a teacher's salary outside of the cost of living, if he would keep himself in the van of educational progress and increase his efficiency. But, by satisfying these demands, he finds that his salary will allow him to save but little towards the care of his old age. This becomes a serious consideration as years roll by; and while he is yet in his prime, where the wisdom he has gained from his studies and the experience he has acquired in imparting that knowledge would make him most valuable as a teacher, uneasiness and uncertainty regarding his future becomes a disturbing element in his work. It has been well said that "nothing depresses personal enthusiasm so much as to be constantly harassed as to one's financial concerns." When the State requires and accepts from a teacher his best mental and physical energies during the active years of his life, it should imply care for him when superannuated, and thus relieve him from his anxiety for his future.

But the granting of a pension will not alone render the teacher's life one of more security and freedom from care for the future, and thus enable him to devote all his energies to his work. This public recognition of the obligations of the State to its superannuated teachers will dignify the vocation and raise the standard of teaching. We all know of men and women that have made their mark in the world, who were once teachers. But there are too many other fields of emolument and honor, which promise better rewards to attract the person of culture and ambition, and thus they were lost to the profession which they might have preferred, and which their talents would have dignified and elevated. Even with a pension granted, the teacher's position would not lead to luxury or wealth. But it would be a career of assured independence, dignity and support that could command and would attract the best intellectual talent. In a Republic like ours, where public education is acknowledged to be one of the most important functions of the Government, every measure that will tend to add to its dignity and efficiency should be adopted.

Our National Government grants pensions to its judges, military and naval officers, private and non-commissioned officers after a term of service, or for disabilities specified in the "Revised Statutes," some on full pay, others on three-fourths or less. Under an Act of the Legislature of California, passed March 4th, 1889, the City of San Francisco grants a pension of half-pay to every policeman who, after twenty years or more of active service, shall have attained the age of sixty years, or who is disabled in the service. Thus, the principle of granting pensions lies in the idea that the person who gives all his active years to the service of the Government should be cared for during the period of his superannuation.

Whether teachers who have passed all the active years of their lives in the educational service of the State should be pensioned is a question that will be

solved in accordance with analogies in other departments of our political organization and with the usages of other nations.

Such analogies and usages justify the teacher's demand for a pension, and lead to the belief that the time is not far distant when Government will recognize the claim. The question is being agitated in several of the States, and noted educators urge its necessity as an aid to the permanency and dignity of the profession.

The pensioners in this State would probably never be numerous. In San Francisco, there are but seven teachers who have remained in the department for thirty years, and while records cannot be found giving the number who have taught in the public schools of the other counties of the State for that length of time, there are probably not a score altogether in California.

Granting pensions will not interfere with the removal of incompetent teachers, neither will it keep in the profession those who have no enthusiasm for the work. Thus, while a pension will be an inducement to persons of intellectual tastes to take up education as a career, it will be no temptation to those who use teaching merely as a stepping-stone to something else.

In no branch of the public service is there such a constant and exhaustive strain upon the attention and temper as in the schools. Thoughtless and ofttimes unkindly criticism is bestowed upon the teacher and his vocation, and yet into his hands is given the most trying and the most useful work of the Nation—the making of intelligent citizens and good patriots from whatever material is committed to his charge. Is not a profession that accomplishes such results worthy of taking rank with the highest? And does not the teacher deserve a pension when superannuated, as much as judge, soldier or policeman?

IDOL AFFECTIONS

BY ROSE MAYNARD DAVID

What count these earthy baubles, — things of state —
When one loved best of all that's loved on earth
Has left us to a present desolate
Where courted pleasure's place to pain gives birth.

I peer into the dark'ning silent night;
Some eager thought in mute unspoken word
I might perchance draw from your soul to mine
To quell the battling of a hope deferred.

But chilling, strange, stands silence there impaled
No way past common ways to bear me out
By that grim sentinel so deeply veiled —
I sink into a dreamless sea of doubt.

I know — as one who listens after death —
Our distant paths were led apart that we
Who hung for life upon each others breath
Might greater faith through long endurance see.

Questions of the Day.

ANALYTIC FICTIONS

IT is a matter of no little surprise to one who is much among authors, to see how few of them have any analytic conception of their own writings, and to see how few of them work upon the fundamental laws of philosophy. The human brain is so constituted that it can easily be trained to receive upon the film of its mentality, perfect photographs of the ever-shifting panorama of human life, and it has an unlimited capacity for storing away these negatives for future use. It is this half mechanical trick of the brain that overstocks the ranks of literature with so many writers of ephemeral and worthless fiction. Masters of the pen are as rare as masters of the brush, because so few writers possess the analytical power. One might as well expect to create a world-renowned surgeon from a man who knew nothing of anatomy, and who had never dissected a whole body, or any part of a body; he could neither restore nor adjust distorted muscles. Neither can a writer create character until he has practiced in the mental dissecting room long and patiently, and has learned the laws which govern human action.

Sometimes an author writes a story of such fidelity of trait and incident, that the experienced philosopher draws from it a deep significance. James Sully says in one of his essays: "We are often vaguely aware of impressions and elements of experience, yet do not fully recognize their existence till some one endowed with keener vision and the namer's skill, seizes the shifting, shadowy form and fixes it for all time in a definite shape."

Fortunate indeed is the young writer who has a wise, friendly critic, who will take each of his productions, and with the keener vision, construct from the dry bones of carefully wired together incidents, a living form, or, in other words, who will catch the vague, floating impressions of the tyro and fix them indelibly upon the sensitive plate of a permanent negative. Every delineation of a human character is the picture of a human soul; and until the young writer becomes conscious of that fact, his work will be feeble and unsatisfactory. The majority of young authors string their incidents together as the children in the kindergartens make chains of bits of colored straw, blissful in the ignorance of the fact that they might be making a golden chain of perfect links, a chain that cannot be broken, that will never tarnish, and that will endure longer than any human life.

An author tells the story of a villain. He takes him through all the supposed vicissitudes of a criminal's career. Most of the incidents are, unconsciously, no doubt, drawn from the records of crime that one drinks in as regularly as he does his morning coffee. Perhaps in the end the villain wearies of vice and either repents, restores his ill-gotten gains, is murdered, commits suicide, becomes a minister of the gospel, or else a radical reformer. So far, so good. But no man ever entered upon a criminal career all at once; no life is a succession of exciting crises unleavened by qualms of conscience; the fall from virtue to villainy is usually gradual, and the bottom of the pit reached only after many a bitter conflict between the sense of right and the temptation to sin. Nor is there always a fall. It often happens that a saintly soul growth springs from the blackest mud of crime, of inherited tendencies to evil, of dissolute environments and influences.

How much more powerful, then, a simple narration might be made, if, through the actions, not the moral reflections, of the

principal character, it drew with a master hand the picture of these terrible battles with conscience, which all of us have experienced in a greater or less degree, and for which we have a keen appreciation, prompted by the throb of a responsive chord in our own breasts.

Writers sometimes attain this soul analysis unconsciously, but how much more powerful their work would be if they employed their characters to illustrate the great laws that govern human souls, instead of shaking a few random characters in a box, like marbles in the Pigs in Clover game, depending upon chance combinations to produce a satisfactory *denouement*.

An author who does not fathom the subtleties of the characters in his own books is in the same position as a man who plagiarizes the work of a greater minded man than himself. Anstey illustrates a case of this kind in his novel "The Giant's Robe."

Have you known a liar in your experience? Did he live a despicable, jelly-fish life of evasions, deceit and shame, humiliating his honest wife, ruining the expanding minds of his children by his vile example, alienating friends and sowing seeds of distrust and hatred everywhere?

You have seen the results of such a life; you have seen the chain of incidents of which this history was made. But if you purpose making this man the leading character in your story, the knowledge that comes from seeing alone will not suffice. You must search for the causes that led to this moral decay; you must learn whether inheritance contributed to his weakness; if the sternness of his parents kindled the first fire of deceit in his bosom; if the shadow of a crime committed in a moment of madness makes evasion a necessity. Is he conscious of his sin? Do the timid reproaches of his wife madden or sadden him? Does he ever try to curb his tongue? Does humiliation ever overtake him? Is he prompted by malice or does he idly draw upon a morbid imagination? Has he any moral sense?

In fact there are a thousand questions that must be answered before one can paint the character of the liar with really telling strokes.

The tenderer and finer soul developments of sensitive, highly organized beings require still closer study. Many can comprehend the growth of the evil tendencies of the criminal better than they can the heavenward flights of the saint. Material wrong in the form of specific acts is apparent to the majority of minds, but few indeed are those who even dream of the existence of the fine frenzies, the exquisite tortures of conscience, the delicious enjoyments, the simple sorrows, or the deep floods of passion that form such a great part of the sensitive organization.

George Eliot is the best exponent in the English language of soul development; and one can learn a world of truth from Adam Bede, Dinah, Maggie Tulliver and some of her other characters.

THE SUPPRESSION OF VICE

THERE are some reforms being quietly carried on, which rarely are heard of. An instance in question is the Society for the Suppression of Vice, of San Francisco, an organization which works quietly, yet produces great results. In New York, Anthony Comstock's work is well known; in fact, he has now a national reputation by his bold attacks upon the horde that prey upon the morality of the Nation. It is a good sign of the times that business men in San Francisco can and will interest themselves in this subject of such vital importance. The leading spirit and treasurer of the San Francisco Society is Richard H. McDonald, Jr., who is an active worker, and who has been an important factor in ridding the city of a vast quantity of obscene and immoral literature that great cities are flooded with. Mr. McDonald's example is one that should be followed by business men in general. The majority of men who make up the commercial world claim that they do not have the time, yet every man owes a portion of his time to the cause of morality.

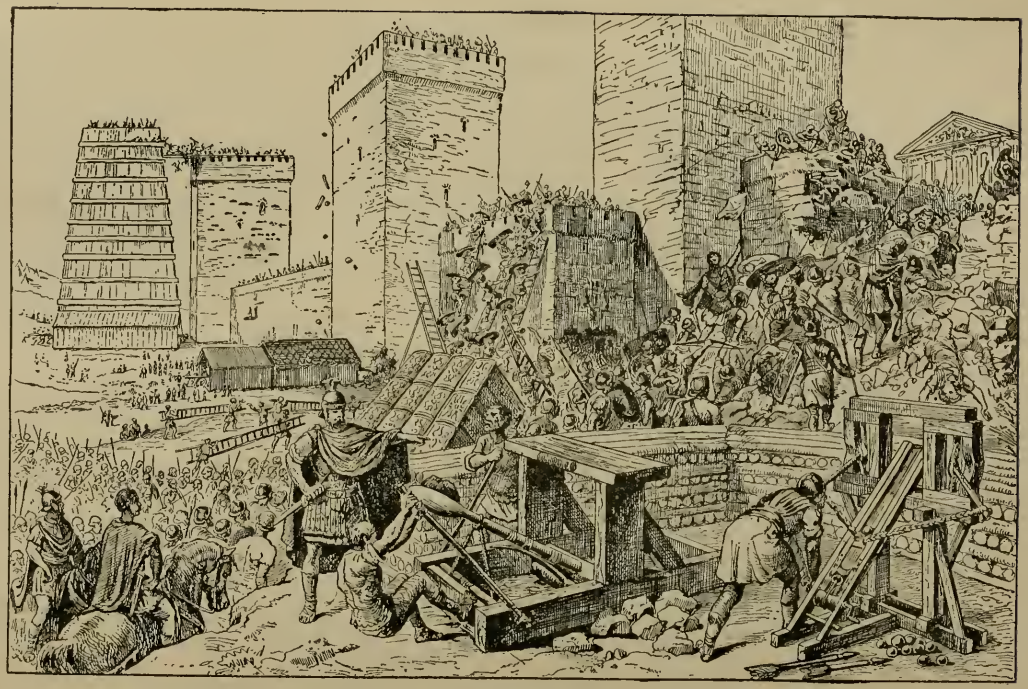
NEW BOOKS

STORY OF DAVID GRIEVE.—Every once in a while some thoughtful literary critic gives voice to the wish that the novelist might appear who could give a clear picture of human soul development. Most writers of fiction are content to sketch, with bold strokes, the great crisis of the lives of their central characters; and if they do try to dissect and analyze the formative processes, they are dubbed "tiresome" by the public, who demand what are now known as etchings and pastels in prose—the most concentrated forms in fiction. In the diary of Marie Bashkirtseff, the superficial world thought that it at last grasped the fixed photograph of a human soul. The thoughtful read it, tried to say Eureka, then sighed and labored onward in quest of a nearer approach to truthful delineation. This Bashkirtseff diary was the story of an emotional, ambitious, abnormal, unevenly developed nature, and one, that had it matured, might as readily have become an exaggerated form of insanity as a bright luminary of genius. Mrs. Humphrey Ward, in her new novel, "The History of David Grieve," rises above the dead level of any school of fiction, and, with the touch of a masterful genius, lays before us the unadorned, unobscured process of the evolution of one human soul from its cradle to its grave. She does not tell an alluring story; she neither undervalues nor overrates the common happenings in the existence of the man in the ordinary walks of life; she points no morals; she simply allows a human life to drift before our eyes in panoramic sequence, trusting to the fidelity of the picture to tell its own tale of maturing processes. The character of David Grieve is based on the merest germ of inherited sturdiness. It would have been quite possible for him to have been a heavy villain had he fallen among thieves, so to speak, early in his career. His early training and his youthful environments were revolting to him, and no tender home influences, delicate associations or religious or moral etchics gave him any foundation to build upon. What he learned was the result of experience; and his lessons bore fruit, as most of our bitter lessons do, unconsciously. David Grieve is not especially attractive, nor is any other character in the book particularly interesting. They are all human, all more or less commonplace, all defective, and none of them would ever make any special demand on our sympathies. They typify the great rank and file, and in that lies the wonderful power of the book. Long after the last page has been read, and the book has been laid away on the dusty shelf, the incidents of the story and the pictures of it will recur to the memory, to substantiate the very incidents we each of us find day by day, so close at hand. We all know our Reubens and Hannahs, our Purcells, our Dora Lonnaxes, our Louies, our Elises and the rest of them.

We can never forget the picture of Madamoiselle Delannay's first appearance at the top of the staircase, in the third-rate pension, nor that scene in her studio, where David Grieve and his sister catch their first bewildering glimpse of *la vie parisienne*.

For many of us, the Westmoreland country will be a living landscape, with its wild moors, desolate rock patches, wandering herds of sheep, winds, rains and uneven elevations. To others, again, the most vivid impression will be the glimpse of the few perfect weeks at Fontainebleau, where all that is most bewitching of French suburban life is portrayed.

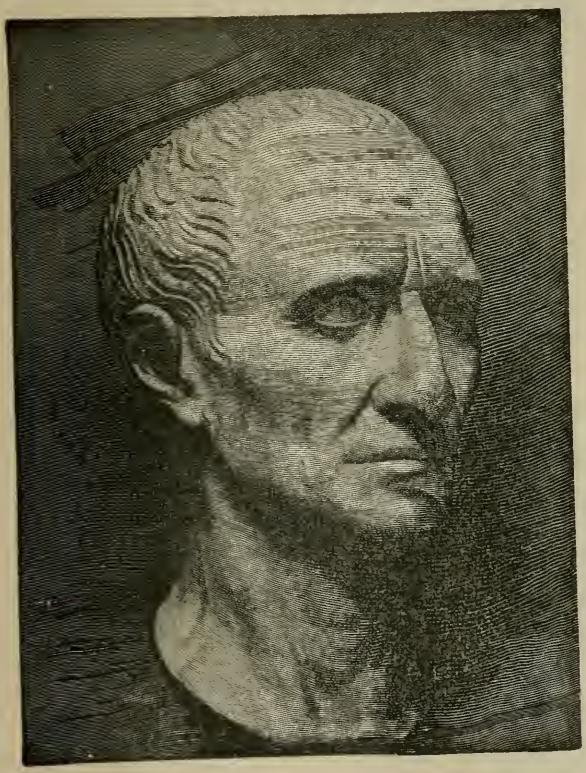
City life in Paris is well drawn, even though it is revolting; but no writer has ever made it anything else, from Balzac down through the whole list. There are temperaments that enjoy the scenes of



Sacking the City
From Julius Cæsar

congested life in great cities; but the wholesome mind must always shrink from such conditions.

"David Grieve" is a far stronger work than "Robert Ellsmere," inasmuch as the latter simply drew the evolution of the one side of its principal character—the religious—while "David Grieve" is the delineation of an entire life.



Julius Cæsar, from the Marble Bust in British Museum

LIFE OF JULIUS CÆSAR.—One of the most interesting of the series, called "The Heroes of the Nations," now in course of publication by the Putnams, is the "Life of Julius Cæsar." The author is Mr. W. Warde Fowler of Oxford, England, and his admirable judgment and analytic mind are proved by his clear and thoughtful delineation of the character of this one of the world's great statesmen. Too many historians, in analyzing the reign of Cæsar and the growth of the Roman Empire, have simply chronicled events and results, making Cæsar the central figure of the wonderful drama, and yet never touching upon the essential philosophy of his preeminence, which lay in his superb statesmanship. In the history of the world, we find records of many men of superior will-power and determination, of wonderful genius, of great magnetic power over the inferior masses, of Machiavellian cunning, of brute force, or of mystic influence, but how few in all that luminous galaxy have been masters of legitimate statecraft; how few illustrious names have withstood the tarnishing and sifting processes of the centuries! The political machine and the political headlight have never commanded but temporary remembrance or ascendency; but the statesman is a hero for all time.

In this admirable, though condensed, work on the life and times of Julius Cæsar, there is much of fascinating interest aside from the development of the statesman's character, and this interest is largely supplemented by the fine illustrations, of which two examples are here given. Not the least important feature of the cuts is the presentation of most of the leading portraits and busts of Julius Cæsar extant, the handsomest among these being the marble bust in the British Museum, and one of the most unique being that on a gem in the British Museum. It is one of the most entertaining and comprehensive lives of Julius Cæsar ever written. The publication of such series makes the debt of gratitude to the Messrs. Putnam a large one.

THE STORY OF NEW MEXICO.—To all Americans descended from good old New England stock, or born and nurtured in the plain, practical commercial center of the present time, there is a strange fascination in the wild, romantic, highly colored story of the Indian, Mexican and Spanish races, and their rise and fall and occupancy on this continent. From the time of the

publication of Prescott's "Conquest of Peru" and "Conquest of Mexico," writers and readers and explorers have gone mad over each successive discovery of traces of a prehistoric people.

Professor Ladd, in his latest contribution to the history of New Mexico, gives us a most thrilling picture of Indian and Spanish life.

Here in our midst is a stretch of country originally occupied by the Mound Builders, or people of similar origin, whose fallen walls and picturesque ruins still testify to the activities of a population of many thousands at a time when the knights of the Middle Ages were carrying on crusades to the Holy Land.

Numerous tools, ornaments and utensils indicate the state of civilization of these people. Following these were the different tribes of Indians who swarmed into the country, largely from the Northwest. Among these were the Moqui and Pueblo (including the Zuñis) tribes, the Navajos and Apaches.

They were the possessors of the land when the Spaniards, tempted thither by greed and wild dreams of discovering unlimited riches in the new Western world recently opened to them, were lured to explore and conquer the vast unknown regions of the West. The achievements of Pizarro and Cortez had aroused their ambition to the highest pitch, and noble and peasant alike burned to invade the new country. Religious zeal was also at white heat, and prompted monk and friar to journey wherever they could do missionary work. There is nowhere to be found more heroic self-sacrifice and faithful devotion at all risks to what they considered duty, than these early Spanish missionaries showed in their work of proselyting the Indians of New Mexico and the country round, and the story of their bravery and sufferings thrills the most indifferent.

The conquest and conversion of the natives were, however, matters of great difficulty. The Indians held out against Spanish rule and the Christian religion with about equal hatred of both, and the history of those times is full of wars and tragedy and heroic suffering. Spain conquered in the end, and for a century New Mexico was one of its colonies, finally becoming a part of the Mexican Confederation, which lasted from 1821 to 1846. The war of our country with Mexico followed, and the conquest of New Mexico by the United States gave this rich territory into our possession.

A long series of Indian wars succeeded, the United States Government expending about $30,000,000 in the subjugation of the Indians. The campaigns against the Apaches and Navajos were cruel and bloody, and reflect little credit on the policy of the country. It was in these campaigns that Kit Carson, among many other gallant officers, distinguished himself.

It is pleasant to know that during these latter years, religious and educational institutions have flourished in this much-conquered territory, and that its rich mining and agricultural resources are being rapidly developed. Here is a grand field for intelligent immigrants, and the future of New Mexico largely depends upon their colonization.

Prof. Ladd has carefully elaborated his "Story" from accurate data as well as from material gathered during a ten years' residence at Santa Fé and extensive travel throughout the country. His book will be read not only for its historic value, however, but for the vivid pictures it presents of strange and remote civilization, of splendid savagery, and of gallant courage, such as always thrills the heart and quickens the pulses.

THE LADY OF FORT ST. JOHN.—What Jane Austen has done for New England history in her charming series, of which "Standish of Standish" is perhaps the strongest, Mary Hartwell Catherwood has done for the Canadian-French history. The Romance of "Dollard" probably made more of an impression on the public mind than any other historical novel she has written, yet her latest volume, "The Lady of Fort St. John," is full of dramatic incident, vivid imagery, local color and sturdy romance. The scene is laid in New Brunswick, and the period embraces a part of the seventeenth century. Perhaps the climax of the novel hinges on the storming of the Fort and the surrender of The Lady; but a piece of character drawing quite as strong

in its way is that of the aristocratic old woman, who is "second leading lady," as the stage folk would say.

A System of Practical and Scientific Physiognomy.—From time immemorial, more or less importance has been attached to the development of the head and of the facial lineaments as an indication of certain characteristics; but at best, the whole subject has been treated first as a black art, then as a legitimate art; and so mixed has it been with all forms of mysticism—astrological, phrenological, theological and spiritualistic—that scientists have never given the matter much attention, at least under the appellation of physiognomy. Larator was the first writer to make the effort to dignify it as a science. This was as long ago as 1775. Sir Charles Bell, Spencer, Darwin and others have given physiognomy much careful study since; but it has been the mission of an American —and a woman, too—to place in the hands of the public a well formulated and practical text-book on the science of physiognomy, based on the universal laws of form, as expressed by the configuration of the face, the features, the body, the limbs, etc., and it is in perfect accord with the latest discoveries in physiology, anatomy, embryology, evolution of organic structure and the cognate sciences.

This work is the result of thirty-five years of persistent observation and research, hand in hand with the most advanced scientists of the period, who have been quite as interested in the ultimate result as has been the author herself, Mrs. Mary Olmstead Stanton, of California.

The two volumes, of 600 pages each, are thoroughly indexed, and contain a glossary and complete bibliography. Nearly 400 fine engravings illustrate the work; and in this gallery of portraits, one may find almost every familiar face of the time that has won name and fame for superior development in art, science, business, etc. The medical journals of the country have given the work particular attention, for it seems to be of wonderful utility in medical practice. Mrs. Stanton is a woman of medium height and most attractive nature, great hospitality, broad sympathies, sterling principle, full of enthusiasm, progressive and altogether charming. Her husband, Andrew P. Stanton, is the genial business manager of the San Francisco *Argonaut*, and he takes the liveliest interest in his wife's success.

Mrs. Stanton is an honored member of the Pacific Coast Woman's Press Association, and was its Treasurer for one term, until she took up her residence at her country place, overlooking Monterey Bay.

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1. "The History of David Grieve, by Mrs. Humphrey Ward. McMillan & Co., London. Price, $1.00.

2. "Julius Cæsar, and the Organization of the Roman Empire," by W. Warde Fowler, M. A. Illustrated. G. P. Putnam's Sons, N. Y. Price, in cloth, $1.50.

3. "The Story of New Mexico," by Horatio O. Ladd, A. M. Illustrated. D. Lothorp Co., Boston. Price, $1.50.

4. "The Lady of Fort St. John," by Mary Hartwell Catherwood. Houghton, Mifflin & Co. Boston. Price, $1.25.

5. "A System of Practical and Scientific Physiognomy, by Mary Olmstead Stanton. F. A. Davis, Philadelphia and London. Price in cloth, $9.00, two volumes.

BOOKS RECEIVED

"Those Pretty St. George Girls." A society novel. T. B. Peterson & Bros., Phila.

"The Heiress," by Mrs. Ann S. Stevens. T. B. Peterson & Bros., Phila.

"An Ante-Mortem Statement," by E. W. Howe. Globe Publishing Co., Atchison, Kas. Cloth, $1.00.

"The Days of '49," by Dr. Anna M. Sawtelle, San Francisco, 1892.

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THE CALIFORNIAN

VOL. I. MAY, 1892. No. 6.

THE PRESS OF SAN FRANCISCO.

BY JAMES PRENTISS CRAMER.

NEARLY one thousand editors from the East are to be the guests of California and the Pacific Slope during the present month and the one to follow. Among them are many who knew the California of years ago, its press, and the sturdy men who then framed public opinion, so that the picture of California of to-day, with a press the peer of that of any city of the world, will be of especial interest, and THE CALIFORNIAN while extending these men and women from over the mountains a hearty greeting, is happy in being able to note an advance in journalism and its appliances in this city that is phenomenal. In no way could the evolution of journalism on the Pacific Coast and in San Francisco, in particular, be better emphasized and illustrated than to present one of these visiting editors, in lieu of the *Chronicle*, *Examiner* or *Call*, with their eight or ten pages of news from every quarter of the globe, their clean-cut editorials and book reviews, flashes of wit and humor, a copy of the *Californian Star*, as published in the year 1849, in San Francisco — a four-column, four-page sheet, sixteen by twelve inches, with its contents and locals of a sanguinary line, and its foreign news from four to six months behind the times. The advance has been phenomenal, and to-day few cities in America are better equipped than San Francisco in this respect.

Forty-five years ago, on January 7th, 1847, the *Californian Star* was founded by Samuel Brannan, with Dr. E. P. Jones as editor. It was a weekly of four pages, sixteen by twelve inches, four columns to the page. This was the first newspaper printed in San Francisco. On May 22d of the same year the *Californian* appeared, also a weekly, of the same dimensions as the *Star*. Robert Semple was the editor. Prior to the appearance of the *Californian* in San Francisco it had been issued in Monterey, then capital of the State, issuing its initial number in August, 1846. The type and press used on the *Californian* were brought from the City of Mexico originally, for printing the laws of the then Mexican Government of California, and falling into disuse, they were resurrected from a Spanish cloister by the owners of the *Californian*. Juan de la Rosa, a printer who came from Mexico with the material, died recently at Ventura at the advanced age of 101 years.

The local news of those days consisted principally of murders, robberies, bull fights and "incidents" in the numerous gaming houses. Each paper had a special correspondent at the front and letters from the various mining camps. In May, 1848, the entire staff of the *Star* went to the "diggings" and a few weeks later the *Californian* issued an extra, stating that "the whole country resounded with the sordid cry of gold, gold, and that

they (meaning the staff—editors, compositors, devil and all), were off for the diggings." The editors returning soon revived their respective journals, which very soon after were merged into the *Star and Californian*, and January 4th, 1849, the *Star and Californian* was merged into the *Alta California*, with E. C. Kemble and R. C. Hubbard as editors; in December, 1849, the *Alta* issued a tri-weekly edition, and about a month later appeared as a daily. The day following the *Alta's* debut as a daily the *Journal of Commerce* also came out as a daily, as did the *Pacific News*. Then came in rapid succession to fill the proverbial long-felt want the *Daily Courier-News*, *Evening Mirror*, *Evening Picayune*, *Globe*, *Daily Public Balance* and *Daily True Balance;* and, as if the long-felt want was not yet filled, the Placer *Times* moved down from Sacramento and John Nugent, formerly a reporter on the New York *Herald*, established the San Francisco *Herald*, which suspended publication in 1856 from loss of patronage, owing to its opposition to the Committee of Vigilance.

In no other community in the world has there been more rapid, startling changes in the journalistic world than here in San Francisco during the decade from '50 to '60. New papers were started almost every week, run on certain lines for a week or a month or a year, as the case might be, then presto, came change of owners, change of politics, and frequently sudden collapse.

Loring P. Pickering, Editor of the Call

Frank M. Pixley, Editor of the Argonaut, in his Editorial Room

The *Public Balance* and the *True Balance* soon ceased to balance at all, and the *Globe*, also ceased to rotate on its axis. Almost from its inception, the *Alta* met with reverses, being burned out twice, and after one of the fires it was obliged to issue on letter sheet paper for three days. After several changes in editorial management and proprietorship, it passed into the hands of Messrs. Pickering, Fitch and Company, former owners of the *Times*. In May, '58, they sold it to Frederick McCrellish & Co., who continued its publication for a quarter of a century. At this time there occurred in the history of San Francisco an event which has had in its effect on history no parallel in the annals of any other city in the Union. This was the formation of the Committee of Vigilance. The causes which led up to this dramatic outbreak of outraged public opinion are too well known to need recapitulation here, suffice it to say that the men who then arose and in the name of the people took into their own hands for a short time the enforcement and execution of the law, assumed a heavy responsibility, but future events proved that the occasion demanded just such measures and just such men. The press of San Francisco at that time was in a very peculiar position—to oppose the Vigilantes meant ruin if they were upheld by the people; to uphold them meant ruin if they were successfully opposed by the men whom they were determined to drive out of power.

The *Herald*, then the most popular and powerful journal in the city, was bitterly opposed to the Vigilantes. The *Alta*, on the other hand, strongly endorsed them, saying editorially: "The time has come (referring to the murder in cold blood of James King of William, editor of the *Bulletin* by Casey, whose criminal record he had exposed) to stop such outrages."

The *Globe*, in the meantime was on the fence, but descended on the side of the Vigilantes on the day following the formation of the Committee.

The *Herald* continued to be aggressive and the leading business men of the city, almost in a procession, marched to the office of the paper and discontinued their advertisements and subscriptions. This drove the *Herald* to the wall and it was forced first to reduce its size and finally to suspend publication entirely. It was revived again in '69, but soon went the way of many another journal whose career had been one of "pocket politics" to that bourne whence no newspaper ever returns.

The *Alta* received the patronage of the business men who had withdrawn from the *Herald*, and entered upon a season of prosperity which extended over many years. It ceased to exist about a year ago.

The newspaper men of earlier days were aggressive; the stirring, eventful life of the times demanded a peculiar style of journalism that would be out of sympathy entirely with the public of to-day. Such papers as the *American Flag* with its personal attacks on what were then known as "Copperheads," lead to some serious outbreaks of the mob during the stormy days of '61–'65.

Of the English morning dailies of this year of grace, the *Call* is the oldest. It was founded in December, 1856, by an "Association of Printers," and made its debut as a four-page, twelve by twelve, four-column sheet. It grew quickly into favor and when its success became assured, the names of Colonel James J. Ayres, (now of the Los Angeles *Daily Herald*) David W. Higgins, Lew Zublin, Chas. F. Jobson and Geo. E. Barnes, appeared as the proprietors and editors of the paper, which owes its name to the playing of a farce at one of the local theaters, entitled "The Morning Call."

The paper obtained its name in a novel manner. The owners were standing at the "Printers' Corner," (Montgomery and Clay streets) discussing a name for the bantling, but could not agree, each having a choice. Finally they agreed to "jeff" and

M. H. de Young, Editor of the Chronicle, in his Editorial Room

thus determine the name by choice. "Jeffing" is throwing quadrates of type, the quadrates being nicked and the operation is something similar to shaking dice. At this moment, a bill poster put up a program announcing the "Morning Call" as the farcical attraction at one of the theaters. The printers looked at the program, looked at each other, and the bill of the play seemed to have suggested the same thing to all, for without "jeffing" they decided upon the title of the *Morning Call*.

In 1866, Messrs. Pickering, Fitch and Simonton became interested in the *Call*, and since 1869 Messrs. Pickering and Fitch have controlled the paper.

Mr. Pickering is the dean of journalism on this coast. He was an editor when most of the men now in editorial chairs of coast newspapers were unborn or in the cradle. He was of the day of men such as Gwin, Broderick, Fremont and McDougall, and he is of the men of to-day, still molding and voicing public opinion. A born journalist, he first saw the light in July, 1812, in Cheshire County, New Hampshire, and was a boy in his teens when he began writing for the *Sentinel*, published by John Prentiss. At twenty he sought the West and lived successively in New Orleans, Louisville and St. Louis and also in Illinois, where he engaged in mercantile pursuits.

In 1846, he bought the *Reporter*, and the *Missourian*, both published in St. Louis, subsequently founding the *Union*, which is to-day the St. Louis *Globe-Democrat*.

In 1849, Mr. Pickering arrived in California. He has bought and founded several journals, among others the Placer *Times*, which developed into the present Sacramento *Times and Transcript*. In 1855, he assumed the editorial management of the *Alta California*, which became, under his able administration, remarkably prosperous. His health failing him, Mr. Pickering was ordered by his medical adviser to Europe for a holiday. On his return, in 1860, he became associated with Mr. Fitch and Mr. Simonton in the *Call*, and subsequently in the *Bulletin*, retaining his interest in both papers to-day, but devoting all of his time to the editorial management of the *Call*. For thirty years Mr. Pickering has had to deal with every question of importance that has arisen and it is hardly necessary to say that his handling of them has entitled him to an undisputed claim to integrity, judgment and sagacity. Though a Democrat up to the War, Mr. Pickering became a Republican after the secession of the rebellious States, and has since remained with that political party. He was one of the most efficient supporters of the railroad when it was struggling for existence and opposed it as vigorously when the men at the head of it proposed to sacrifice San Francisco to their private greed. His paper has never been a party organ in that it has blindly followed the wire-pullers of any party, but has fought them always in every attempt of theirs upon the public morals. Now at a time of life when most men are content to rest upon their laurels, he remains in harness, and is actually as well as nominally, editor and manager of the *Call*, and there are times when the bulk of the editorial matter in its pages are from his pen, and he bestows upon every department a minute and careful attention which few editors in chief think it necessary to give.

John Bonner, leader writer on the *Call*, is a Canadian, born in the City of Quebec, educated at Queen's College, Kingston, Ont., and Paris, France. The following mention of Mr. Bonner is from "Allibone's Dictionary of Authors:" "He is the author of 'A Child's History of the United States' and similar histories of Greece and Rome, of 'A Treatise on the Registry Laws of Canada,' of 'The Old Regime of the Revolution,' from the French of Ivequeville, and was for many years editor of *Harper's Weekly*, and one of the editors of the New York *Herald*."

General S. W. Backus—The Wasp

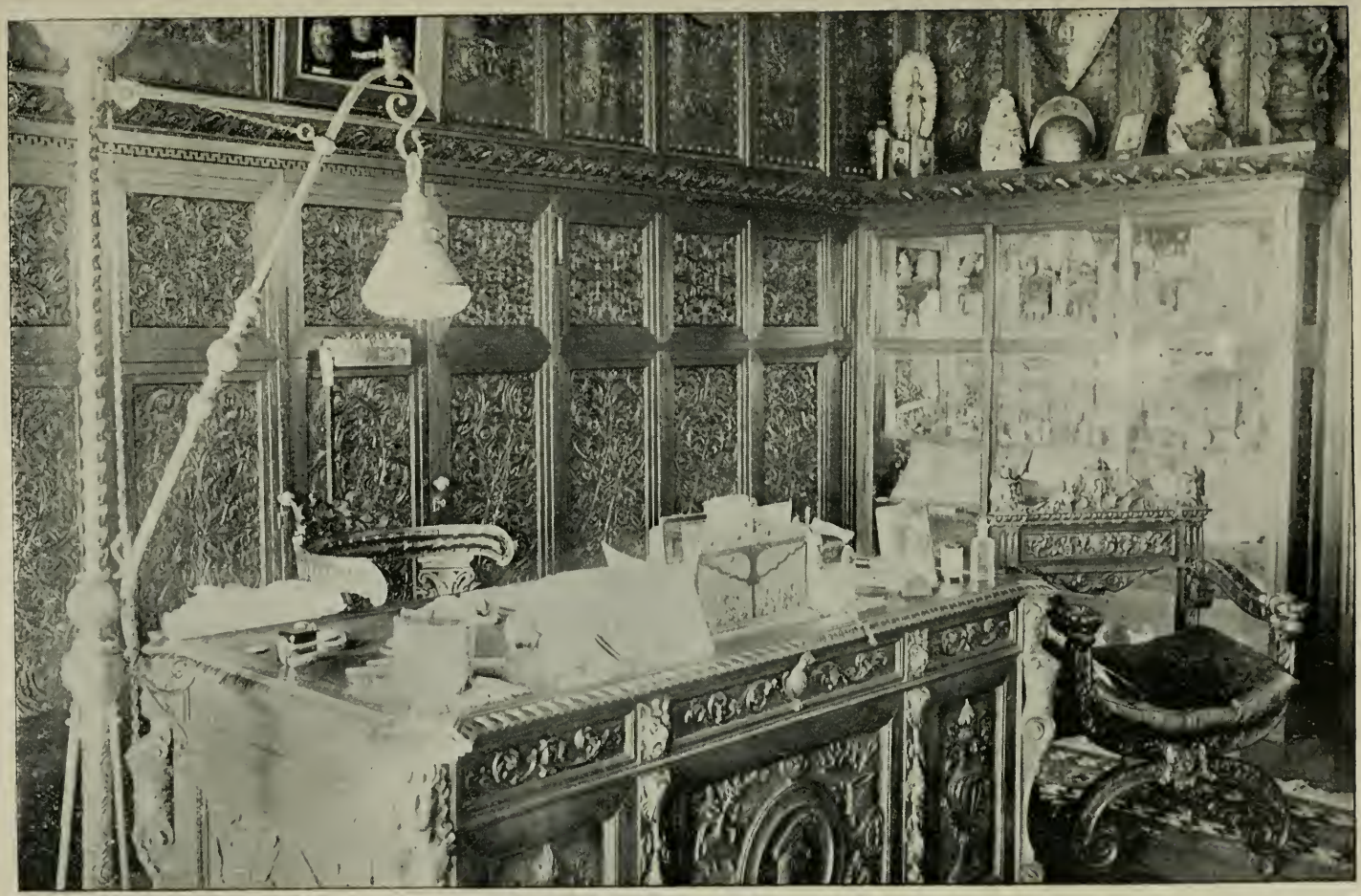
William A. Boyce, managing editor of the *Morning Call*, has been engaged in newspaper work for twenty years. He is a native of New York, and came to California in 1874. His first newspaper connection on the Pacific Coast was as a sub-editor of the *Pacific Rural Press*, and soon afterward he became connected with the *Examiner*, then an afternoon paper. Later, he was employed on the *Chronicle*, and in 1879 accepted a position on the local staff of the *Morning Call*, with which journal he remained nine years. During the height of the Southern California boom, Mr. Boyce went to San Diego as city editor of the *Sun*. After returning to San Francisco, he was connected with the *Chronicle*. In March last, he returned to the *Call*. Mr. Boyce has one important qualification for a newspaper man—he knows news when he sees it, and is recognized as one of the best writers on the coast, and as possessing qualities which make him one of the best equipped journalists in the country.

George E. Barnes, the dramatic critic of the *Morning Call*, is probably one of the best-known newspaper men on the Pacific Coast. He is a native of New Brunswick. When a boy, he went to New York, where, for several years, he worked at the case, most of the time in the old *Tribune* office. He went to New Orleans early in the fifties. From the latter city, he came to San Francisco. When the *Morning Call* was started, Mr. Barnes was one of the five incorporators. The paper was a success from the start. The burden of the editorial work fell upon him, and he soon gained a reputation as a graceful and vigorous writer, which he still maintains. Mr. Barnes after disposing of his interest in the paper to Loring Pickering, was engaged for a time in mining, but soon returned to his chosen profession. He has been dramatic critic of the *Call* for many years, and it is conceded without question that in that department of journalism he is the peer of the best critics in this country or Europe.

Gilbert B. Densmore, senior editorial writer of the *Morning Call*, is a native of Connecticut. He came to California in 1849, and most of the time since has been connected with journalism in this city. He was one of the founders and early editors of the *Golden Era*, a publication that numbered among its contributors the most gifted writers on the coast. It is nearly twenty years since Mr. Densmore penned his first editorial for the *Call*, and during that time not a day has passed that he has not contributed more or less to its columns. He writes equally well on all subjects, and there are few men in the country whose daily productions maintain so equable a standard.

John P. Young, Managing Editor of the Chronicle

The *Chronicle* of to-day, with its



A Corner in the Chronicle Editorial Room

palatial home at the corner of Market and Kearny streets, is the outcome of a little sheet issued as a theater program, at the sides and in the back of which were printed advertisements of all kinds.

The *Dramatic Chronicle* introduced a new feature in San Francisco journalism. The first number was issued on January 27th, 1865. The paper at first was little more than a program of the theaters, being distributed to the patrons of theaters and on the streets free of charge. In fact, it was a *Chronicle* of the times — local, critical, musical and theatrical—and the office was known as the headquarters of the Bohemians. Among the "staff" were James F. Bowman, Samuel Clemens (Mark Twain), Charles E. Northeys, Bret Harte, Charles Warren Stoddard, G. B. Densmore and others, then well known to local fame. On August 18th, 1868, the word *Dramatic* was dropped from the head line. The *Chronicle* had come to stay.

M. H. de Young, the proprietor and editor of the *Chronicle*, is probably the most widely known among newspaper editors on the coast and at the East. When a mere lad, he was attracted to a printing office and learned the printer's trade. The story of the way he and his brother in ten years made the *Chronicle* a great newspaper is too well known to repeat here. De Young probably knows all the detail of newspaper work, from the business office to the composing-room, better than any proprietor in the country. He is in close contact with all departments of his paper, despite the large outside demands made upon his time and energy. He has remarkable executive ability, and he is able to dispatch a mass of business every day because of his memory of detail. He writes but little, but he dictates a clean-cut editorial or gives in a few vigorous sentences the outline of an article which he wishes developed. He is devoted to California and the coast, as he has shown in his work as the Vice-President and California Commissioner of the World's Fair. Mr. de Young is noted for the interest he takes in all that concerns newspaper men, and he was recently elected President of the International League of Press Clubs and a life member of the New York Press Club. He is also mentioned as a candidate for the United States Senate, to succeed Senator Felton. He is a contributor to the magazines and literary periodicals of the day.

George Hamlin Fitch, Literary Editor of the Chronicle

John P. Young, the managing editor of the *Chronicle*, received his newspaper training in the hard school of Washington local work and correspondence. For five years he was city editor of the Washington *Chronicle*, and afterwards one of the staff of correspondents, that Editor Story of the Chicago *Times* maintained at the na-

tional capital. Mr. Young is recognized as an authority on the tariff and silver questions. In fact, during the last campaign, no paper in the country surpassed the *Chronicle* in its able and full discussion of the protective policy, and its work was commended by prominent Republican leaders at Washington. Mr. Young is a Pennsylvanian, forty-three years old, a rapid and untiring worker, and a walking encyclopedia of statistics on foreign and American finance. He has held his present position fourteen years.

The night editor and literary editor of the *Chronicle*, George H. Fitch, was trained on the New York *Tribune*, and came to the coast twelve years ago. Educated as a boy in the San Francisco public schools, and afterward spending ten years at the East, he is equally familiar with both sides of the country. He combines the executive and literary in his work. His specialty is literature, and he has made the book reviews of the *Sunday Chronicle*, known all over the coast for their honest and clear-cut criticism. Mr. Fitch is thirty-nine years old, a graduate of Cornell University, the correspondent of the New York *Tribune* and several other Eastern newspapers and also a contributor to the magazines of the day.

Horace R. Hudson
City Editor of the Chronicle

Horace R. Hudson, city editor of the *Chronicle*, obtained his first taste of journalism as assistant editor of the Albany *Times*. He made his first hit on the *Chronicle* as legislative correspondent at Sacramento. In this work, he showed rare aptitude in foretelling political events and in giving the digest of important measures. On his return, he was made city editor, an exacting position which he has filled with credit for thirteen years, a feat which is without parallel in this city, as five years is a long term at this hard desk. Mr. Hudson is a man of fine presence, forty-three years of age. He is an authority on foreign politics, and is an accomplished French scholar.

The *Examiner* first appeared as an evening daily in June, 1865. Its proprietor was W. S. Moss and B. F. Washington was managing editor. For many years, the Hon. Philip A. Roach and George Penn Johnston were connected with the paper, editorially, and soon built up its reputation for the excellence of its editorials.

In October, 1870, the *Examiner* became the property of the late Senator George Hearst, and was at once

W. R. Hearst, Editor of the Examiner

changed to a morning daily, and with the change in proprietorship came also a change of management, and the paper at once took its place in the foremost rank of metropolitan dailies. In 1887, W. R. Hearst succeeded his father in the proprietorship and management of the paper, and has ever since filled the onerous position of managing editor.

C. M. Palmer, Business Manager Examiner

Mr. Hearst was born in this city April 29th, 1863, at the corner of California and Montgomery streets, and was educated in part at the Hamilton Grammar School. Here, while still a mere boy, he made a reputation for his style and composition in English. After a tour of Europe he entered a preparatory school at Concord, Conn., and graduated from Harvard in 1886, after which he returned to San Francisco and assumed the management of the *Examiner*, and in March, 1887, he became its sole proprietor and managing editor. From that time on Mr. Hearst has been so closely identified with the *Examiner* that its history has been his biography too. He introduced a new era of journalism on the Coast, and has, by a happy combination of brains, money and courage, made the *Examiner* one of the leading journals of the country, with a circulation equal in proportion to population, to the very largest. This result has been achieved by Mr. Hearst's close

personal attention to every detail of his business, which he so thoroughly understands. In personal characteristics he is a quiet, modest gentleman; his pride and ambition are centered in his newspaper, which, from its first five years under his management, gives promise of still greater achievements.

As business manager of the *Examiner*, C. M. Palmer has contributed in no small degree to its phenomenal success. He has filled the position only since January 1st, 1889, but has already made a reputation among newspaper men on this coast second to none. Mr. Palmer was born in Wisconsin thirty-five years ago. Before he was of age he went to Nebraska to make his fortune, and there did his first newspaper work on the *Tecumseh Chieftain*, a small country weekly. The financial returns were small, however, and young Palmer's ambition large, so that he was compelled to teach school that he might increase his income, and devoted his small leisure to reading law. Not finding the fortune he sought in Nebraska he returned to Wisconsin and connected himself with the La Crosse *Democrat*, at that time conducted by the author of "Peck's Bad Boy," who is now Governor of Wisconsin. The *Democrat* being sold in 1876, Mr. Palmer joined the staff of the La Crosse *Republican and Leader*, and in a short time became city editor and business manager of it. After holding these positions for three years he removed to Minneapolis, and during his residence there became interested in almost every paper published in the city,

Frederick Hess, Editor of the Demokrat

either as a stockholder, manager or proprietor, and is at present owner of the *Northwestern Miller*, one of the leading trade papers in the country; also part owner of the Minneapolis *Journal* and the *Daily News* of St. Joseph, Mo. Mr. Palmer's phenomenal success in newspaper management led Mr. Hearst to retain his services for the *Examiner* just after Mr. Palmer had sold the Minneapolis *Tribune*. In the two years that he has been at the head of the business office of the paper he has done much to complete the success of which the story was told in the edition of March 4th last, the sixth anniversary of the *Examiner* under W. R. Hearst's editorial management.

S. S. Chamberlain, news editor of the *Examiner*, is a native of New York City and was graduated from the University of New York in 1871.

His first newspaper work was done on the Newark, N. J., *Advertiser*, and soon after he became assistant city editor of the New York *World*, under William Henry Hurlbert. He then connected himself with the New York *Herald* and was for several years James Gordon Bennett's private secretary. In 1882 Mr. Chamberlain founded the morning *News*, an English paper in Paris, which introduced the system of furnishing daily telegraphic news, something before unheard of in Parisian journalism. The paper entered the field against the *Messenger*, and was an immediate success. Mr. Chamberlain was also the one to introduce the American personal interview to the Parisian world. He also founded *Le Matin*, a French morning daily, on the lines of the News. *Le Matin* had the novel feature of daily articles from the pens of journalists representing the four principal political parties of France. Paul De Cassagnac represented the Bonapartists; Emanuel Arene, the Government; Henri Rochefort, the Socialists, and J. Cornely, the Legitimists, in the columns of *Le Matin*. These were the star political newspaper writers of Paris, and their daily thunderings at one another, all in the same paper, attracted universal attention. The paper immediately jumped to a circulation of 50,000. After his Parisian success Mr. Chamberlain returned to the New York *World*, and three years ago Mr. Hearst retained his services for the *Examiner* as news editor, and his novel features in the news service of the paper have contributed much to its success.

T. T. Williams, city editor of the *Examiner*, has been an active newspaper man in San Francisco since 1879. In 1880 he became sporting editor of the *Examiner*, and at the same time did special work for the paper. He next connected himself with the *Breeder and Sportsman* and then went to the *Alta* when James A. Johnson and Walter Turnbull undertook to build up its failing fortunes. When Colonel Jackson became proprietor of the *Evening Post* Mr. Williams undertook its management for him and retained the position until the paper was sold in 1889. Mr. Hearst then secured his services as a special writer for the *Examiner*, and after three months he was made city editor. Mr. Williams is also dramatic critic for the *Examiner* and succeeds in making his players' column one of the best of its kind in the country. In addition to his regular editorial work Mr. Williams does special correspondence for several leading Eastern dailies.

Ambrose Bierce, an editorial and special writer on the *Examiner*, has attracted no little attention to the journal by his caustic papers and critical style. Mr. Bierce is a contributor to the press of the day—a writer for the magazines—and the author of several books, his latest being a collection of his published short stories, issued in San Francisco.

The California *Demokrat* (German) is the oldest daily now in existence on this Coast, founded in 1853 by Dr. Von Loehr as editor and business manager. After varying fortunes the

Demokrat was in 1858 bought by Mr. Frederick Hess, a mere lad of eighteen or so. He has continued to control the paper ever since. Dr. Von Loehr continued in editorial charge until 1877, when he died and was replaced by Mr. Gruenblatt, who has continued as managing editor ever since. In 1853, when the *Demokrat* was founded, the German population of the State was estimated at fifty-three thousand, and that of San Francisco at ten thousand. Now the *Demokrat* has an audience of one hundred and eighty-five thousand in the State and sixty thousand in the city, and it is an immense influence for good, not only amongst its own countrymen, but with all classes and nationalities. Mr. Hess has shown himself a man of great energy and ability, and has, by his business tact and perseverence, made a unique record for himself among newspaper men. Mr. Gruenblatt is a thorough newspaper man, and his wide-minded attitude on all questions of political and social economy has had no small share in making the present prosperity of the *Demokrat*.

The *Abend-Post* (German) was founded as a daily in 1859 by Mr. La Fontaine. After many vicissitudes it passed into the hands of Messrs. Adolph, Charles and Leon Samuels, representing the *Post* Company. Under these gentlemen's energetic and conservative administration the paper has prospered and is to-day one of the most ably edited evening papers in the city.

The *Evening Bulletin* made a mark in journalism and turned the tide of affairs in this city. It was perhaps the most aggressive, fearless journal ever printed in San Francisco, considering the almost total lack of law and order in San Francisco at that time. In fact the fearless course of the paper brought about a reformation but the reformer lost his life. The *Evening Bulletin* first appeared on October 8th, 1855. At the head of the editorial column was, "James King of William, Editor." Mr. King came from Washington, D. C., where he had been connected with the banking house of Riggs & Co., and also engaged in journalism with Amos Kendall of the *Globe*.

The *Bulletin* was a success from the start and was enlarged three times in as many months. The paper is now a seven-columned, four-page sheet, nineteen by twenty-six inches. Mr. King was a fearless newspaper man and to his zeal, exposing the corruption in local politics, he owes the loss of his life. After the death of James King, his brother, Thomas S. King assumed the management of the *Bulletin* in May, 1856, and continued as managing editor until he was succeeded by John W. Simonton. In June, 1859, Geo. K. Fitch purchased an interest, and later Loring Pickering, and ever since they have controlled the *Bulletin*.

Matthew G. Upton, chief editorial writer of the *Bulletin*, was born in Ireland, and is about sixty-five years old. He is a graduate of Trinity College, Dublin, studied medicine and law, and was admitted to the English bar. He came to the United States when a young man and became a reporter and writer for New York papers. Coming to California in 1852 under an agreement to conduct a Democratic paper at Sacramento, as an organ of the Douglas-Broderick wing of the party. He afterward worked on the San Francisco *Herald*, when Andrew J. Moulder was local editor. Mr. Upton became editor of the *Alta* and continued in this position until about twenty years ago, when he resigned and entered the service of the *Bulletin* as editorial writer. Upton is a powerful writer and probably the ablest political and financial debater on the coast.

The *Evening Post* was founded in 1871. It was started by four or five newspaper men as a venture. It was at first probably the smallest daily newspaper ever issued.

The *Post* passed into the hands of its present proprietor and editor,

William Mitchell Bunker, Editor of the Report

George Heazelton in 1889. Mr. Heazelton is a native of Pittsburg, Penn. He was educated at the public schools of his native city and graduated from the High School. He then entered Oberlin, and completed the classical course there at nineteen. Going abroad, he entered the University of Gottingen, Germany, and later, Heidelberg. After two years at these institutions, he went to Paris and there continued his education. Upon his return to America he came to California and joined the *Chronicle* staff as a reporter, later he was exchange editor, and finally, for five years, was Washington correspondent of that journal.

Under his management the *Post* has shown great enterprise in securing local and telegraphic news, and it has made a feature of illustrations which add so greatly to the attractiveness of a newspaper.

Prominent among the evening dailies of San Francisco for its enterprise and fearless and independent policy is the *Daily Evening Report*, which had its origin in a mining circular. It first appeared as a weekly in 1863, and later was issued as a noon daily with mining and stock market news. It continued on these lines until 1875, when it was bought by William Mitchell Bunker, who had been on the editorial staff of the *Bulletin*, Later, in 1877, Mr. Bunker associated Mr. Hiester with himself as business manager of the *Report*, Mr. Bunker retaining the editorial management, and they have built up the circulation of their journal until it has become phenomenal. William Mitchell Bunker was born in Nantucket, Mass., in 1850, and is a newspaper man not only from inclination and training but also by heredity, for his grandfather was and his father is a journalist. Coming to California in 1863, his first connection with journalism was as a compositor on the *Bulletin* staff. He rose rapidly in his profession, and during the twelve years he remained on the *Bulletin*, he filled the positions of reporter, news editor, dramatic critic and literary editor, but most of his time was passed in the city editor's chair, and there he developed that talent for obtaining news and serving it to the public taste that has made him the successful proprietor that he is. Mr. Bunker was noted as one of the most indefatigable reporters San Francisco ever produced. He never gave up a scent after taking it up. Everybody remembers the Riley-Cannon fight and how Mr. Bunker at the risk of his life, swam ashore from the steamer with his note book wrapped in his shirt and tied about his neck and clad only as he came into this world, remained at the ring side, reported the fight to the last blow of the last round, and then hurried back to the city to give the *Bulletin* the best report of the contest published. In 1873, Mr. Bunker went to the front at three hours' notice, as special war correspondent during the Modoc Campaign. He was the only correspondent present at the capture of Captain Jack, the news of which his papers got before any other correspondent or even the War Department knew anything about it.

Mr. Bunker has made a reputation as a magazine writer in addition to his newspaper work. He is an active member of several clubs, the Olympic Press Club and the Bohemian, and was Vice-President of the Olympic for two years; he was Chairman of the Citizens' Executive Committee, which raised $31,000 and put over eleven hundred needy men to work for thirty days in the bad winter of '89 and' 90, when, owing to the continual heavy rains, all outside labor had to be discontinued, and but for the generous philanthropy of such men as Mr. Bunker, there would have been much greater want among the working classes.

Associated closely with the success of the *Report* is A. C. Hiester, part owner and business manager of the paper. Mr. Hiester is a native of Ohio, fifty-six years of age, and has

A. C. Hiester, Business Manager of the Report

been a newspaper man from his teens. He first entered the office of the Germantown *Western Emporium* in 1850, and after serving out his apprenticeship of five years, he came to San Francisco, landing here in 1856. He first worked on the Marysville *Appeal*, then took to mining for a couple of years, but in 1858 he returned to newspaper work, and took a position on the *Alta*, leaving that journal for the *Golden Era*, and that for the *Bulletin*. He remained with the *Bulletin* until the strike of 1869, and after a short engagement on the *Chronicle*, he took the superintendency of the *Report*. When the *Report* passed into the hands of Mr. Bunker, Mr. Hiester bought a half-interest in it, and has been head of the business department of the house since.

Among the weekly papers of San Francisco widely known throughout the entire country, the *Argonaut* stands pre-eminent. It was started by Frank M. Pixley and Fred M. Somers, in 1877, as an independent political and literary weekly. Mr. Pixley was for many years a prominent San Franciscan attorney, but retired from active practice, and having always been a frequent and valued contributor to the local press, he naturally took to journalism, and his vigorous editorials are one of the features of the *Argonaut*. Mr. Somers, owing to ill-health, disposed of his interest in the *Argonaut* in 1879, and his place as managing editor has since been filled by Jerome A. Hart, under whose direction the *Argonaut* has maintained its unique position in journalism. Its crisp and fearless treatment of all public questions, the short stories for which it is famous, and its clever presentation of the social, literary and artistic news of the world, have made it one of the most widely read and quoted of American weeklies.

The *Wasp* antedates any other paper of the same class in the United States. It was founded in 1870, and was the first cartoon paper (in colors) ever published in America. Messrs. Korbel and Brothers were the original proprietors, and it had several different owners and editors, until finally, in 1889, it became the property of Samuel W. Backus. Charles W. Saalburg is cartoonist, and he is frequently assisted by Mr. Henry Nappenbach. General Backus was born in 1844 in New York, but has grown to manhood in California, and has for thirty years been in public life. Coming here in 1852, he was educated at the public schools of Sacramento. He served in the Civil War, joining the Army of the Potomac in 1862. He was made a Second Lieutenant at 19, and served with distinction until the close of the War. He served in the Modoc wars of 1865–6, and for a time commanded at Fort Bidwell. Retiring from the Army, he entered the civil service, first in the Internal Revenue Department, and afterward in the Custom House, in 1867 he gave up the public service for private business, and became a commission merchant, and for ten years did an extensive trade. In 1878, he was elected to the State Legislature from the same district with the late Hon. John Swift. He was appointed Adjutant-General by ex-Governor Perkins in 1880, and was a most efficient officer, reorganizing the State militia thoroughly. He was San Francisco's Postmaster, under President's Arthur's administration ('82–86), and made such an enviable record as an administrator of public affairs that President Harrison re-appointed him in 1890, and he still holds the position. General Backus is still a comparatively young man, and in his management of the *Wasp*, brought to bear his great abilities to good advantage.

Recently a joint stock company was formed, of which Thomas E. Flynn, a well-known local journalist, is the leading stockholder. Mr. Flynn is by all odds the best humorous writer on the coast, and as he is the editor, he bids fair to make the *Wasp* the equal of the large Eastern comic papers.

George Heazelton, Editor of the Post

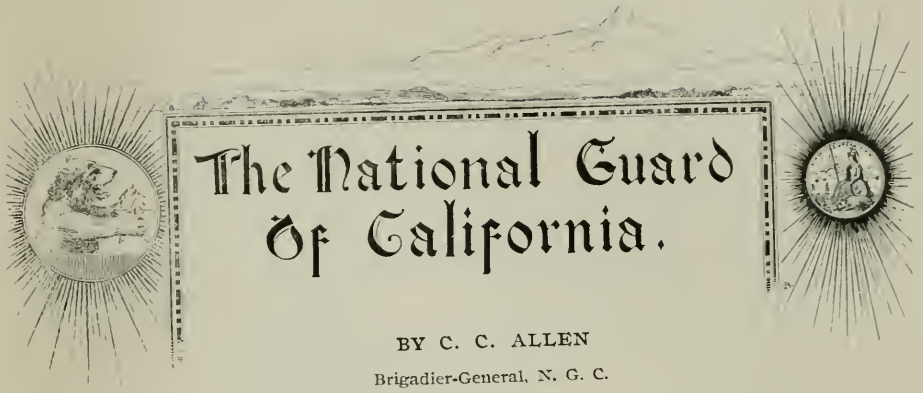
The *Weekly Monitor* was established in 1858 by Messrs. Marks, Thomas & Coy, as the organ of the Catholic Church. It passed through many hands until 1880, when it came into the hands of Stephen J. McCormick, a bold writer of great abilities. Mr. McCormick formerly edited *The Catholic Sentinel*, at Portland, Oregon. Mr. McCormick formed a joint stock company, and himself assumed the active editorial and business management, and the journal's success in his hands was assured. After a brilliant and useful career, Mr. McCormick laid down his pen forever, in August last, when he joined the great majority. The editorial management passed into the capable hands of Bryan J. Clinch, a learned and able man. Jos. S. McCormick is city editor and Frank L. McCormick is business manager.

The *City Argus* is a weekly, established in 1879 by R. E. Culbreth and W. W. Randall, the former becoming sole proprietor in 1880. It has grown from a small, five-column sheet to its present dimensions. It is noted for its clever cartoons, one of which appears in each issue.

The *Wave* is a bright weekly devoted to society news and gossip. Its editors and proprietors are Messrs. Cosgrave and Hume. The *Wave* is filled with bright, clean and witty articles from the cleverest pens in the journalistic field.

The *News Letter*, well known throughout this country and Europe, was founded in July, 1856, and was at first simply a sheet of blue letter paper, one side of which was a three-colum newspaper, the other being left blank for the purchaser to fold and write the address upon and then mail. The idea was popular, and the paper throve. Its founder, Frederick Marriott, was a journalist of experience, having been the founder of the *Illustrated London News*, and connected with other prosperous journals. Mr. Marriott succeeded in making his journal very popular, and at his death he was succeeded by his son, Frederick Marriott, in the proprietorship of the paper. Its popularity and prosperity still continue.

There are a number of other trade, society and denominational journals issued in the city which it is impossible to name and classify in the limits of a magazine article. Each has a clientele of its own, and speaks each week to a group of readers who look as eagerly for them as the business man for his *Examiner*, *Chronicle* or *Call*. The object of the present paper was to call attention to the wonderful evolution of journalism from the *Star* of 1849 to our great morning and evening journals of 1892, employing hundreds of men and women, spending millions of dollars in gathering and printing and spreading news from every quarter of the world, watching with increasing vigilance the custodians of the people's property, ready at a moment's notice to spend money, time, even life itself in the interests of the public—and all this in forty years—an evolution that marks San Francisco as the home of enterprise and progress in more fields than journalism.



The National Guard of California.

BY C. C. ALLEN

Brigadier-General, N. G. C.

"AN efficient military organization is a necessity. It is a part of the government; first, as a protection from external aggression, and secondly, to insure domestic tranquility in the full and complete protection of persons and property at home."

The exercise of the military power which imparts to the whole fabric of government its cohesion and strength is exerted in emergencies and in times of peace relapses into preparatory and ceremonial phases which by their apparent inutility often deceive the popular mind into depreciation of their value. Those who are responsible for the administration of military affairs and the preservation of good order in times of public danger are compelled to appeal to popular judgment to demonstrate the necessity for an efficient military organization and its retention and support.

Some very crude ideas prevail that the military organization of the State is superfluous, that there is no necessity for it, and that its abolishment would be advisable. The man at the plow sees no necessity for an armed police, but the inhabitants of a great city know very well that protection to life and property depends upon the efficiency of the local police. One man with a revolver can drive a dozen farmers from their homes. The dangerous elements that congregate in our large cities are only restrained from pillage and rapine by the fear of the armed police which, in extreme cases, is supported by the military forces of the State. That the militia has been necessary to the peace of the commonwealth, the following incidents will prove.

In 1871, one company each of the National Guard and the Sumner Light Guard were ordered to Amador County to quell a riot growing out of a collision between the miners' league and the mill owners. Again, in 1877, the companies were called out to guard the armories, and prevent the destruction of valuable property during the three days' riots in San Francisco when the mob fired lumber yards and threatened the destruction of the city. The service rendered on this occasion amply illustrated the benefit to society of these organizations.

In December, 1872, Indian depredations of a serious nature occurred in Siskiyou County, where many lives were lost and much valuable property destroyed. Fifty rifles with necessary ammunition were sent to arm the citizens of that county. January 10th, 1873, sixty rifles with ammunition were forwarded to Dorris Bridge, and May 1st, a company was organized at Crescent City, Del Norte County, and armed with fifty rifles. May 15th, eighty sabers and eighty Colt's revolvers were sent to a company formed at Scott River, Siskiyou County, and on May 20th, a company of scouts was organized there for active service.

Governor H. H. Markham — Commander-in-Chief

On February 28th, 1876, the troops of the Second Brigade were ordered to San Quentin, by request of the civil authorities, on account of a fire at the prison, to prevent the escape of the convicts, and protect the property of the State. The conduct of the troops was satisfactory in the extreme. July 22d, the Stockton Guard, Captain Lehe, was ordered out to protect prisoners from mob violence. In 1877, the Chico Guard was called upon to assist the authorities in protecting and guarding prisoners sent to General McComb to arm recruits in his Brigade. The police force of the city at this time numbered 150, and the militia, 1,200, and were regarded as inadequate for the work in hand. So serious was the danger that in forty-eight hours there were mustered into service five thousand men in companies of 100, After three days of intense excitement and after much property had been destroyed by the rioters, order was restored and the troops returned to their civil affairs. Again in July of the same year several

Light Battery A—Captain Hugh T. Sime, Commanding

taken from Chico to Oroville. Owing to the excitement produced by the riotous proceedings in the East, serious apprehensions were felt that evil disposed persons in San Francisco and Oakland who had made violent threats would resort to violence. General McComb, in command of the Second Brigade, made requisition for ten thousand rounds of ammunition; Captain Hanlett, of the Oakland Guard, for two thousand rounds; Captain Lehe, of Stockton, for one thousand rounds, all of which were furnished. Six hundred rifles were companies of this brigade were ordered to duty by request of the civil authorities, which prompt action served to quell the riotous populace. Five thousand dollars was appropriated by the Legislature to pay for services of the militia in San Francisco.

In April, 1882, four companies of the First Artillery, Sacramento, were ordered out to quell a riot occasioned by the murder of a prominent citizen of Sacramento. The prison was surrounded by an angry mob, which threatened to take the prisoner by force and visit upon him the penalty

General C. C. Allen — Adjutant-General

of death. Through the efforts of the officers of this command and the excellent discipline of the soldiers these designs were prevented. The Governor specially complimented the men upon the admirable manner in which they had performed their duties.

In July, 1884, upon the demand of the Sheriff of San Joaquin County, the Stockton Guard and the Emmet Guard of Stockton were ordered out to assist the civil officers in enforcing the law of that county. This is known as the "Moquelumne Grant War." Many men with their families had settled on lands that the courts had decided belonged to the railroad company, had put in crops and were resisting the officers in attempting their removal. They were well armed and expressed their determination to resist the execution of the law to the last extent. After several days of camp life the settlers surrendered, the writs were served and the troops returned to their homes. Their prompt response to the call of the Governor, and their cool and soldierly bearing while in camp evoked the commendation of the executive. The appropriation of $4,142 in payment of their services was made by the Legislature at the following session.

As to the riots of 1877, in San Francisco, when the "Safety Committee" was organized and the protection of the city was given into the hands of a self-appointed committee of citizens, the National Guard was never satisfied with the authorities on that occasion and believed that this committee was inimical to peace. The parading of the police, appointed by this committee, through the city, armed with pick handles as emblems of authority, tended to excite ridicule in the ranks of the rioters as well as among the citizens. With so efficient organization of the National Guard as we now have in that city such a condition of affairs will hardly again arise. It is admitted now that the knowledge of the fact that we have an armed and disciplined force has tended to preserve peace through the troublesome riotous agitations of the past few years.

In 1886, occurred in San Francisco what is known as the "car strike." The difficulty arose on behalf of the gripmen and conductors on the Sutter Street road, regarding wages; a strike was inaugurated and efforts were made to prevent the operation of the road. A large class of the people sympathized with them. The armories of the National Guard were threatened, and fears were entertained that the arms would be seized and placed in the hands of the riotors. In consequence, guards were placed in the several armories and were maintained there for a period of forty-three days, at an expense to the State of $3,877, which was paid by an act of the Legislature the following winter.

These are but a few instances showing the uses to which the National Guard is put and its desirability as a standing organization.

Every able bodied male inhabitant of the State of California, Mongolians and Indians excepted, between the ages of eighteen and forty-five years, excepting ministers of religion, civil and military officers of the United States, officers of foreign governments, civil officers of this State, and all persons exempt from military duty by the laws of the United States, is subject to military duty. There are in this State 153,389 such persons liable to be called upon for this duty. The law provides that the organized uniformed militia shall be known as "The National Guard of California," and shall not exceed sixty companies. As organized it is as follows: The Governor, Commander-in-Chief; the Adjutant-General, with rank of Brigadier-General, who is ex-officio Quartermaster-General, Commissary-General, Chief of Ordnance and Chief of Staff; one Assistant Adjutant-General; one Surgeon-General; one Judge-Advocate-General; one Chief Engineer; one Paymaster-Gen-

Headquarters, Camp Allen — Santa Cruz, 1898

eral and one Inspector-General of Rifle Practice, each with the rank of Colonel, and fourteen aids-de-camp with the rank of Lieutenant-Colonel. The Division, Brigade and Regimental Commanders have each a corresponding staff except as to number of aids and relative rank.

The State troops are divided into six Brigades, and the organized force in each is as follows: First Brigade, 769; Second, 2018; Third, 414; Fourth, 423; Fifth, 400; Sixth, 150; in the Naval Battalion, 380; making a total of 4554 officers and men. Maj. Gen. W. H. Dimond commands the division comprising the whole.

Brig. Gen. E. P. Johnson, Los Angeles, is in command of the First Brigade, with two regiments, the Seventh, Lt. Col. Howland, six companies; the Ninth, Col. E. B. Spileman, six companies.

General John H. Dickinson—Second Brigade

The Second is commanded by Brig. Gen. John H. Dickinson, San Francisco, with the First Infantry, Col. W.

Captain S. P. Blumenberg—First Troop Cavalry

P. Sullivan, Jr., seven companies; the Second Artillery, Col. Wm. Macdonald, seven companies, including one light battery; the Third Infantry, Col. Thos. F. Barry, seven companies; the Fifth Infantry, Col. D. B. Fairbanks, with six companies, the First Troop Cavalry, Capt. S. P. Blumenberg, unattached.

Brig. Gen. M. W. Muller is in command of the Third Brigade, headquarters at Fresno, with one regiment, the Sixth Infantry, Col. Eugene Lehe, six companies.

General J. W. B. Montgomery—Fifth Brigade, Chico

The Fourth is in command of Brig. Gen. T. W. Sheehan, Sacramento, with First Artillery, one company of which is armed and drilled as a light battery, commanded by Col. J. W. Guthrie.

Brig. Gen. J. W. B. Montgomery, Chico, is in command of the Fifth Brigade, with one regiment, the Eighth Infantry, Col. Park Henshaw, six companies.

The Sixth Brigade is in command of Brig. Gen. J. W. Freese, Eureka, with one battalion and two companies, the Tenth, under Maj. J. D. H. Chamberlin.

The First Infantry, Second Artillery and Third Infantry are located in San Francisco, also the First Troop Cavalry. The companies of the Fifth Infantry are located in San Jose, Oakland, San Rafael, Petaluma and Santa Rosa. The companies of the Sixth in Stockton, Modesto, Fresno and Visalia; the Seventh Infantry in Los Angeles, Ventura, Pasadena (the Markham Guards) and Anaheim; the Eighth in Chico, Colusa, Marysville, Red Bluff, Redding and Oroville; the Ninth in San Diego, Santa Ana, Riverside, San Bernardino and Pomona; the Tenth Battalion in Eureka and Arcata.

The office of Inspector-General of Rifle Practice was created in 1878, and the duty imposed upon him was to prescribe rules and regulations for rifle practice. He had authority to examine officers as to their proficiency in target practice, and had general supervision of all matters pertaining to this important part of a soldier's duty. It is to be regretted that these duties have been permitted to lapse into "desuetude," and that there is not that attention paid to details of target practice that the good of the service demands.

Target practice is obligatory upon every member of the National Guard. In June and September, each officer and man is required to fire ten shots, and those making a score of sixty out of a possible one hundred at these shoots are awarded a silver medal and a bronze marksman bar; those mak-

First Troop of Cavalry—San Francisco

ing eighty per cent, a silver medal and a silver rifleman bar, and to those making ninety per cent, a silver medal and a gold sharpshooter bar. Enlisted men must have attended sixty per cent of company drills for the past year. Those making a score of ninety per cent may compete for the gold medal, which is the highest prize for marksmanship. This year the contest lies between Colonel Kellogg (retired) and Captain Adolph

Rifle Practice Medal

Huber of the Second Artillery. Interest in target practice increases every year, and the appropriation for that purpose does not cover the amount expended by the several commands by more than fifty per cent. Under the orders of 1890, when the percentages were five per cent lower than in 1891, one thousand and twenty-five medals were issued, while in 1891, notwithstanding the increase of percentage, the number reached nine hundred and eighty, which shows a marked improvement in shooting.

Under the regulations governing the National Guard, no man is furnished blank cartridges when "business" is required. Should the force be ordered out to quell a riot, and the necessity for firing arise, no man is permitted to fire blank cartridges or to fire in the air. It is well that this fact be known, as the impression prevails in some quarters that a few rounds would be fired to scare the mob before actual business began.

The companies are required to drill at least three times each month, excepting in the month of December, but usually four drills are held. Armory rents and incidental expenses are paid out of the appropriation for this purpose. The allowance to each infantry and artillery company drilling as infantry is $100 per month; to the cavalry company, $150, and to each light battery, of which there are two, $200 per month; to each Regimental Headquarters, $7.50 per month for each company in the command; to each Brigade Headquarters, $5 per month per company in the brigade for expenses. The Major-General receives for incidental expenses $600 per annum. The allowance to the Signal Corps is $2.50 per man per month.

Annual encampments are provided for. The State pays transportation of men and horses, tents and baggage, and subsistence not to exceed $400 to each company. The attendance last summer averaged seventy-five per cent of the entire force, and was satisfactory in results. The exercises consist in drills, guard duties and other exercises incident to service in the field; the soldier is taught obedience to orders, to rely upon himself and to acquire that steadiness of purpose so necessary to military discipline. The health in all the camps was good, food abundant and well prepared, and the surgeons' reports were generally satisfactory. The discipline is better year by year, and though the frequent

The Governor's Guard at Santa Monica

changes by reason of removals and expiration of service tend to demoralize the commands, there are several thousand men scattered throughout the State, who have had more or less experience in the line, and could be relied upon to fill the ranks of a very efficient armed force.

From the report of the Brigade Surgeon of one of the camps in an Eastern State, it appears that the men were seriously affected by poison ivy, mosquitoes, chiggers and fleas, and so

General T. W. Sheehan—Fourth Brigade, Sacramento

serious were some of the attacks, that the patients were disabled from the performance of duty. The surgeon finds it necessary to prescribe a remedy for each of the above-named "enemies of good order" for future encampments, which is printed in the report of the Adjutant-General. The report proceeds: "The cyclone of Friday night, August 15th, proved very disastrous; * * * about one-third of the tents were submerged, and the calamity of longer remaining in camp could be foreseen; * * * it was the unanimous opinion of the regimental surgeons to break camp at once, and camp was abandoned at noon."

This sounds peculiar to the California guardsman, as nothing like any of these "calamities" has ever been experienced in any camp in this State. Clear skies, pure air and perfect freedom from poison ivy, mosquitoes, chiggers, fleas and cyclones are among the experiences of our soldiers.

Last winter the Legislature authorized the formation of an additional force to be attached to the National Guard, to be known as the Naval Battalion. It is composed of four companies, or, more properly, divisions, of eighty men each—one in San Diego, Lieutenant T. A. Nerney, and Divisions B, C and D, commanded by Lieutenants J. J. Fitzgerald, C. A. Douglass and L. H. Turner. Lieutenant-Commander Fred B. Chandler commands the battalion. This organization is designed to fit men for the Navy, the new armed vessels requiring an entirely different class of men from the old sailing ships. Already there is a demand for new seamen such as will be educated in this batallion to man the new sea-coast defense vessels being constructed in San Francisco. The general Government arms the battalion, but the men are required to furnish their own uniforms.

Following the old policy of doing things only by halves, as in case of the National Guard, the Government simply supplies the arms and says, "now go and fit yourselves for seamen; we will want you one of these days." Thanks to the liberality of the citizens of San Diego and San Francisco, the entire force is now well equipped. The Secretary of the Navy has notified the Adjutant-

General's office that the allotment of arms has been made to this State, (which is in excess of that of any other, we having already mustered more men than either New York or Massachusetts) and that a vessel will soon be placed in the harbor of San Francisco, to be used by the battalion for purposes of drill. It will have boats and heavy guns, and a naval

Colonel R. E. Murray—Assistant Adjutant-General

officer will be detailed to instruct the men in practical seamanship, gunnery, etc. A majority of the officers have had sea service in the Navy and marine, and are discharging their duties in a satisfactory manner. No provision has been made by the State for payment of armory rents and other expenses, but the officers have given liberally of their private means for this purpose. The organization should have aid from the State, and should receive the cordial support of the people of the cities in which it is located.

The command is under orders of the Commander-in-Chief, and is governed so far as practicable, by the rules and regulations of the National Guard.

By an Act of Congress, in 1882, the Secretary of War is authorized, whenever the Governor of any State bordering on the sea or gulf coast, and having a permanent camp ground for the encampment of the militia not less than six days annually, shall make requisition for the same, to furnish two heavy guns and four mortars with carriages and platforms for the proper instruction and practice of the militia in heavy artillery drill. Brigadier-General Dickinson is giving his

attention to this matter and we have hopes that some suitable camp ground may be secured soon, when the requisition will be forwarded and the guns will be placed in some suitable position on the coast.

General Cutting has introduced a bill in Congress repealing the century old militia law and providing for a reorganization of the National Guard of the country in harmony with modern ideas. It is still the law that militia officers shall be armed with a "spontoon," whatever that may be, and that the men be provided with equipments unknown to this generation. It also increases the appropriation for the militia of the United States from $400,000 to $1,000,000. Should this become a law we may hope to have one of the most efficient military organizations in the country.

During the late discussions in the public press of the question of war with Chili, the attention of the country was called to the standing and efficiency of the National Guard of the several States, and it was alleged that the Adjutant-General of the Army laid before the President statistics showing the strength and efficiency of this force and the condition of the militia in case demand should be made for volunteers. The National Guard of the country amounts in round numbers to one hundred thousand, and it is safe to assume that one hundred thousand more have had more or less experience in drills and in camp life. The old heroes of the late war although willing to again enter the service of the country, should their services be required, are now too far along in years to take up arms in a contest abroad. To this generation belongs the duty of defending the honor of the country, and the question of the efficiency of the National Guard of California, should we be called upon to defend our own cities, was one that was discussed among business men with much interest. I am glad to say that from the tone of the correspondence to the General Headquarters of

Squad of Signal Corps in the Field—San Francisco

the Guard, the greatest enthusiasm was manifested by the rank and file, and they showed a willingness to take any part that would be assigned them, should war be declared. These men are patriotic, they love our institutions and are willing to risk their lives in the defense of the country. It is not boasting to say that we are a great nation, and the intelligence of our soldiery has no equal anywhere, and it is not confined to any locality. Should the nation be engaged in war, the young men of the South and the East would vie with the North and the West in deeds of heroism and self-sacrifice. Whatever small politicians may say, we are one people, one in patriotism, one in devotion to the honor of the flag.

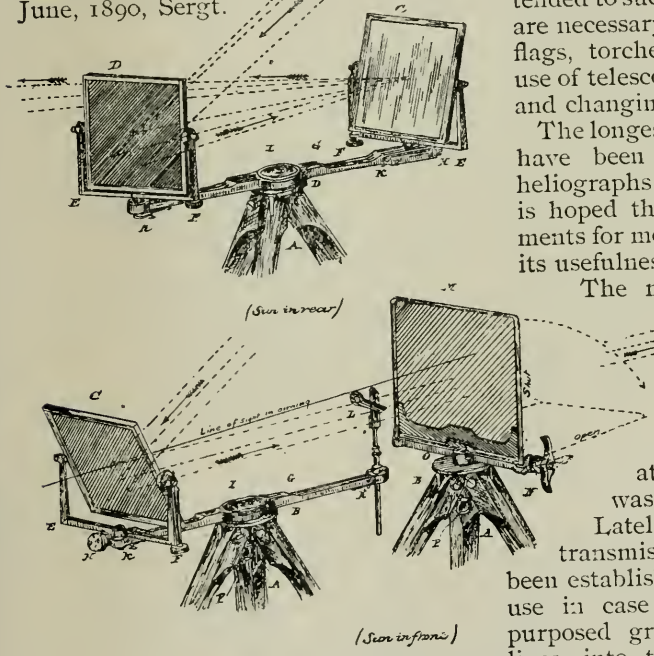
Another feature of the National Guard of California is the fact that politics is not permitted to enter the organization and political discussions are discountenanced. Some of the prominent officers served in the Confederate army, while their regimental associates fought against them in the late war. In the selection of general officers, the Commander-in-Chief has shown that the question to be considered was as to their qualifications, and his appointments have met the approval of the friends of the organization. His earnest interest in the Guard has been shown on all occasions, particularly during the session of the Legislature when, had he not personally appealed to leading members of that body, the appropriation would have been reduced to such an extent that the organization could not have been maintained. Economy is demanded in the expenditures and strict accounting of moneys expended as required. The taxpayer will willingly vote the necessary appropriations if he is convinced that the results contemplated in legislation will be secured.

Prior to April 1st, 1889, the Signal Service of the National Guard of California consisted of Regimental Corps, composed at first of details from various companies, and later organized under a law passed by the Legislature in 1887. These Corps were under the command of Regimental Signal Officers, and consisted of from ten to fourteen men each.

The Signal Corps Uniform and Arms

But Major E. A. Denicke, Signal Officer of the Second Brigade (now Lieutenant-Colonel and Division Signal Officer), who had served in the U. S. Signal Corps during the Civil War, soon perceived that detachments of so few men could not perform practical work to much advantage, and obtained the introduction into the State Legislature of a bill authorizing Brigade Signal Corps. This bill became a law early in 1889, and in April of that year the Signal Corps of

the Second Brigade was organized. Its charter members were members of the Regimental Corps of the First and Fifth Infantry regiments. It soon completed its limit of membership—forty. The Corps was under the command of the Brigade Signal Officer, but was without company officers. This deficiency was remedied in part by the appointment of First Sergeant W. E. Brown to the office of First Lieutenant and Signal Officer of the First Regiment, and detailing him to the command of the Corps in November, 1889. In June, 1890, Sergt.



The Heliograph

C. J. Evans of the Corps was appointed Signal Officer of the Second Regiment, and detailed for duty with the Corps. This arrangement continued until 1891, when the law was amended to provide for company officers of each Brigade Signal Corps, so that at present the Corps consists of forty men, and has as officers a Captain and a First Lieutenant.

The Corps went into camp with the Second Regiment, at Monterey, in 1889, again with the Second Brigade, at Santa Cruz, in 1890, and also in 1891.

Although its duties call for mounted service, it has not, until lately, been provided with the necessary equipments. A few horses, however, were taken into camp in 1891, and the experiment proved so successful that it is expected that the entire Corps will be provided with mounts at the next camp, as forty saddles and bridles have just been re-issued for its use.

The drill of the Corps has been extended to such infantry movements as are necessary, signaling with wands, flags, torches and heliographs, the use of telescopes and the establishing and changing of stations.

The longest ranges of flag signaling have been twelve miles and of heliographs eighteen miles. But it is hoped that, as it has now equipments for mounts, it will demonstrate its usefulness at greater ranges.

The members make frequent short trips to points around the bay for the purpose of signaling, and the Corps has had several bivouacs and minor camps, at which much experience was gained.

Lately, several lines for the transmission of messages have been established in San Francisco for use in case of riot, etc., and it is purposed gradually to extend these lines into the country surrounding the bay.

The present officers connected with the Corps are Major D. E. Miles, Brigade Signal Officer, and Captain Charles J. Evans and First Lieutenant Abbot A. Hanks, company officers.

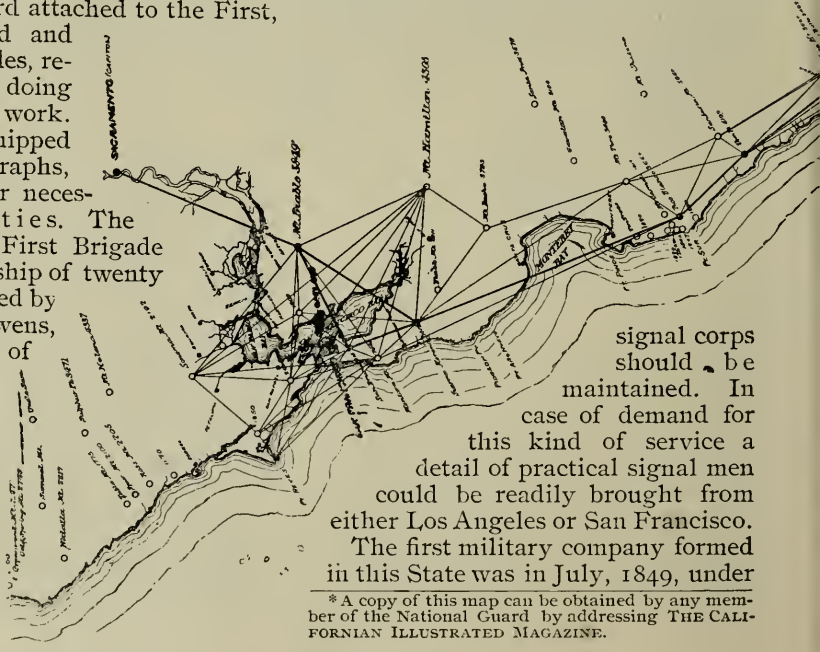
Although scarcely three years old, the Corps has provided itself with a supply of tents, cooking utensils and other camp equipments.

There is also one company of Cadets in San Francisco, composed of students

attending the Boys' High School, which is attached to the First Infantry. The officers receive warrants and hold their positions during good behavior or until they leave the school. This is the only Cadet Company in the State and no more will be authorized as the appropriation for arms and equipments is not sufficient to meet the increased demand.

Under the law the students of the University are organized into a body known as the "University Cadets." The officers, between and including the ranks of Second Lieutenant and Colonel, are selected by the Chief Military Instructor, with the assent of the President of the University, and receive their commissions from the Governor. The arms and equipments are received from the General Government, and the military instructor is detailed by the Secretary of War. Upon graduating or retiring from the University, such officers may resign their commissions or hold the same as retired officers of the University Cadets, liable to be called into service by the Governor in case of war, invasion, insurrection or rebellion.

There are four Signal Corps, in the National Guard attached to the First, Second, Third and Fourth Brigades, respectively, all doing excellent work. They are equipped with heliographs, flags and other necessary properties. The Corps of the First Brigade has a membership of twenty men commanded by Maj. M. T. Owens, Signal Officer of the First Brigade, and one First Lieutenant; the Second Brigade Corps commanded by Maj. D. E. Miles, has a Captain, a First Lieutenant and forty men; the Third has ten men commanded by Maj. M. De Vries, and one First Lieutenant, and the Fourth has ten men under Maj. W. H. Sherburn, and one First Lieutenant. The service performed by these commands while in camp was excellent and successful signaling was done to a distance of several miles. Some work by Corporal Wm. A. Burr, First Brigade, is worthy of special mention. He has made a map of the coast heliograph system,* herewith shown, extending in Southern California more than one hundred miles in direct lines, with bases at Pt. La Jolla Soledad, near San Diego, San Clemente Island in the Santa Barbara Channel and San Pedro Hill, near San Pedro. He has also plotted a system of coast stations from these points to Sonoma Mountain, Mt. Diablo, Mt. Hamilton and points near San Francisco. More than twenty-five stations are designated on this map north of the Tehachepi which could be utilized should the necessity arise for communicating by signals. It is questionable, however, if more than two signal corps should be maintained. In case of demand for this kind of service a detail of practical signal men could be readily brought from either Los Angeles or San Francisco.



The first military company formed in this State was in July, 1849, under

*A copy of this map can be obtained by any member of the National Guard by addressing THE CALIFORNIAN ILLUSTRATED MAGAZINE.

Coast Heliograph System
San Diego to Sacramento — Prepared for
Brig. Gen. C. C. Allen, by Corporal W. A. Burr

the name of the First California Guard, with forty-one members, increased to one hundred in September. Henry M. Naglee was commissioned Captain. At present it is known as Light Battery A, Second Artillery, San Francisco, under command of Captain H. T. Sime. This company was called to Sacramento to quell the squatters' riot of 1850. In 1854, six companies in San Francisco were formed into a battalion, and in 1856, when the Vigilance Committee assumed the government of the city, the battalion was ordered to report for duty to the Governor. In 1855, Gen. W. T. Sherman was appointed Major-General of the State forces, but owing to disagreements with the Governor, resigned in 1856.

The organization of the militia was by Act of the Legislature in 1861. It provided that the persons liable to military duty should be divided into two classes; all whose names appeared on the muster rolls of a military company were designated as the "organized militia," and all others as the "enrolled militia," and made some slight provision for arming, clothing and disciplining the organized force. The Act of 1862 provided for the calling out of the entire body of the militia, if necessary, to preserve the peace.

In 1864, a State military fund was created by the levy of two dollars upon each male inhabitant of the State, twenty-one years of age and over, California Indians alone excepted. John Chinaman had not been considered up to that time, but he is not forgotten since, and is not excepted in the matter of taxation for all purposes.

The Statute of 1866 authorized the formation of sixty companies to be known as "The National Guard of California," but only forty companies were mustered. All companies were required to meet for drill at least once in each month, but in San Francisco and Sacramento they were required to drill once a week. It provided for three parades each year, the fourth of July, the ninth of September (Admission Day) and for target practice. The law provided further that all persons in the military service should be exempt from the performance of jury duty, payment of road tax and

head tax of every description, and from service on *posse comitatus*. Horses, arms, and equipments were exempt from execution, and after seven years' service, a man could demand and receive a certificate of exemption from the above-named duties, except in time of war. This is still the law. The appropriation was fifty dollars per month to each infantry and cavalry company, and to each light battery twenty-five dollars per month for each gun, for armory rents; to the commanding officer of each regiment fifteen dollars per month, and to each Brigadier-General one dollar per month for each company in his command. One and one-fourth cents on each one hundred dollars was levied on all property for military purposes.

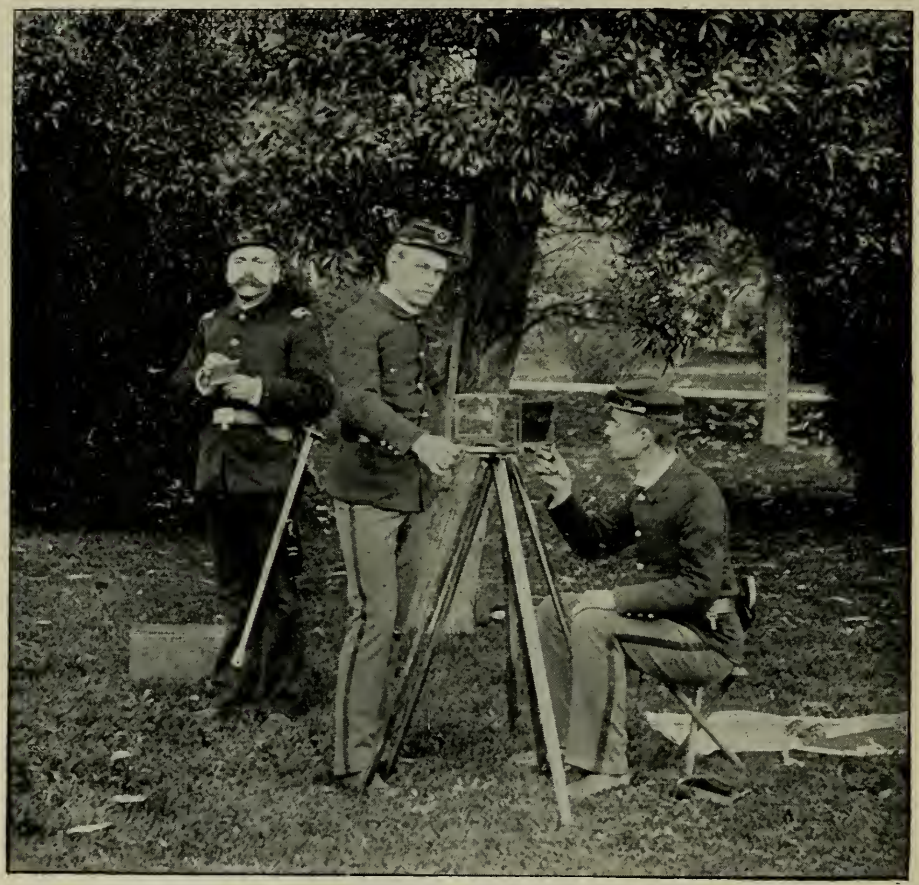
The new Drill Regulations of the U. S. Army, adopted in this State, make many changes in the organization necessary. They provide for two or more battalions to each regiment with a Major in command of each. It is charged with some truth, that our system is already "top-heavy" with officers, and that the additional officers increase its heaviness. But our present organization is in accordance with that adopted by the Government and to conform to the new order of things, it will be necessary to recruit the companies to seventy-four men each. One difficulty arises in the fact

General W. M. Muller — Third Brigade, Fresno

The Markham Guards, Co. B, Seventh Infantry, First Brigade—Pasadena

that the appropriation for clothing is nearly exhausted, and no provision is made for uniforming any more men than we now have on the rolls. There are now sixty companies with three thousand seven hundred and ninety-three enlisted men, being an average of sixty-three men to a company, so traveling under orders when actual expenses are allowed.

One of the most discouraging hindrances to the success of the National Guard is the seeming indifference of many business men to its welfare. They have large manufacturing and mercantile houses in



Major Owen Signaling with Heliograph — Los Angeles

that when the authority to clothe the additional number necessary, to conform to the new Regulations is conferred by the Legislature, we will have the new battalion formations. All officers are required to furnish their own uniforms and equipments, and their duties are performed without cost to the State, except where which thousands of dollars are invested and more than any one class are dependent for success upon an orderly community. In times of violence they are the first to cry out and are the most anxious for the enforcement of the law. They have in their employ a great many young men connected with the military. Are the latter to

bear the burdens of the soldier, stand as sentries at the doors of employers, take the risks of attacks by riotous mobs and give their best days in preparing to satisfactorily perform the duties of armed defenders of the laws, and as now be met with threats of discharge by employers, in case they are ordered to camp or to parade? Which class has the greater interest in good order?

the State, and it is but proper that there should be recognition, not to any particular locality or individuals, or class of individuals, but that all the various districts that contribute to the maintenance of the guard should, in some substantial manner, receive acknowledgment for the services rendered.

The National Guard of California is an educational organization. It

Major-General W. H. Dimond

The guard of this State is not a regular force; it does not serve for pay; it gives its time and brains and honest efforts to the work in hand, practically free of cost to the State. At the very least no member of the guard ever receives an adequate return for the time, money and labor he puts into the work, unless it be from the consciousness that he has in some small measure performed his duty to

teaches and enforces discipline, it developes self-reliance and soldierly bearing, it instills in the minds of the young men that love of order and protection to life and property upon which alone the peace of the country is assured. The soldier feels that he is a part of the government and has within him a feeling of pride of citizenship that adds to the glory of being one of the great whole.

SOME AMERICAN GLACIERS

I

BY CHARLES R. AMES

HEN AGASSIZ established his Hôtel des Neuchâtelois on the glaciers of the Alps, fifty or more years ago, and astonished the scientific world by his novel ideas regarding glacial laws and their importance in the world's history the American glacier was unheard of. For years the glacier of the Aar, the famous *mer de glace* and other rivers of ice that flow down from the great peaks of the Alps have been one of the "wonder attractions" of Europe. Adventurous men and women have gone thousands of miles to look upon the white river in summer, and risked their lives to ascend to their sources in the upper cloudland of the famous mountains; but gradually America is robbing the old country of its time-honored claims, and to-day the American can in all truthfulness say that the Alpine rivers of ice are but bagatelles to the mighty glaciers found in our northwest possessions. America is the home of the great glaciers, and in Alaska and in the State of California are to be found some of the grandest examples of this awe-inspiring phenomenon.

It is a singular fact that few Americans, even upon the Pacific Coast, are aware of their proximity to the glacier country, and my own knowledge came one day when sitting in the Union Club, New York. I had been reading an account of the ascent of the glacier of the Aar, and, throwing down the paper, announced to a friend that I was going to make it the following summer. "Why don't you patronize our own glaciers?" he remarked; and this led to my learning of the frozen snow rivers of Alaska, and the following spring found me, not on my way to Switzerland, but flying across the continent to San Francisco where I caught the steamer, and in three days found myself at Port Townsend with passage taken on the *Queen* for the land of the glacier. In the Western country everything is big. One expands and is prepared for anything; yet I was surprised to learn that Alaska, for which we were bound, contained 600,000 square miles of territory, was, in fact, a fifth of the United States; yet such is the fact, and when this marvellous country comes to be fully investigated and explored the wisdom of the purchase will be shown.

Port Townsend is a most interesting point, and I climbed to the heights to the west of the city to view the snow-capped Cascade Range which has small glaciers of its own, and now lay stretching all across the eastern horizon from Mt. Baker at the north to Mt. Tacoma at the south—a grand and impressive sight. Port Townsend is a thriving, bustling city of some six or seven thousand people, with good hotels, churches, theatres and shops. As it is the port of entry for all the Sound country it must always be a town of much commercial importance. Indeed, after New York, it boasts a greater export tonnage than any other port in the Union.

The harbor approach to Victoria is extremely picturesque, and indeed Victoria is beautiful from every point one approaches. The streets are well paved and kept; the buildings noticeably good, architecturally; the residences are all attractive, some of them even palatial, and surrounded with perfectly-arranged grounds and gardens a mass of bloom. The view

Map Showing Glaciers of Glacier Bay and Vicinity

from Beacon Hill is one of the finest I have ever seen and is noted the world over. The chief charm of Victoria, however, to me, was the fact that its people are never in a hurry. There is none of that constant rush and worry, of the impatient crowd seen in the Sound cities. The Victorians take life easy and it shows in the appearance of the good, strong, sturdy, red-cheeked children one sees everywhere.

As we steam slowly through the narrow strait that connects the inner way far forward and, leaning over the rail, give way to musing. The air is redolent of the salt sea, and the piney balsam of the forests. We are, as it were, threading a great river, which winds between the mainland of British Columbia and Vancouver Island. For nearly three hundred miles, the mountains of both mainland and island are curtained in green, from water's edge to snow line. Every now and then this green is corded with silver, as the snow-fed watercourses rush down the val-

The Face of Muir Glacier

and outer harbors of Victoria, and head for the famous inland passage, the sun is setting, and the sky, sea and islands are aglow with color, and such color! Beginning with a most rich and generous red at the sky line, it recedes through every shade of red to its opposite, green, and then through greens again to red, a most unique and pleasing effect.

We are in the latitude of long twilights now, and as it is light enough to read on deck until almost ten o'clock, no one thinks of retiring until after that hour. I make my leys, to hurl themselves in a cloud of spray into the waters of the sound. Sometimes the channel leads our ship so close in shore that the spray of the falling water from some lofty cliff falls on our decks in a smart shower. The west wind sings weirdly through our scant rigging, and as the twilight deepens into the short northern night, I allow my vagrant fancy to run riot, and set the harp-like notes of the wind in the rigging to words—and what words *would* that west wind sing save those of the Saga song of the Norseman, boldest sailor and

fiercest fighter of them all? Is not this Norway, this land of deep fjiord, pine-clad mountain and black, rock-ribbed coast, with the sting of ice in the air, the long twilights and that faint, ghostly quiver of lance-like light that shoots quiveringly up the northern sky, the aurora? Surely it is, and I have some of that fierce old blood in my veins, degenerate, may be, from long generations of civilization and soft living; but it leaps the quicker, and my muscles grow tenser and hand clutches close as the closing on sword hilt as I dream strange dreams of fair-haired giants, and long war-ships with banks of rowers who sang strange songs as they bent to the great ashen blades, songs of girls left behind and strange lands to be sought, of great battles to be fought and won, and much treasure to be brought back and laid at the feet of the yellow-haired ones. Just then I am brought to myself by a hand on my shoulder, and turning, find the purser asking me to come and smoke a nineteenth-century cigar in his room.

The following day found us still steaming through the same seemingly endless channel, with the mountains on either side and islands looming up in front of us in the most unexpected way. Sometimes we came to passages so narrow, through which the tide is rushing at such an awful rate, that one instinctively wonders if we shall get through at all; but our Captain knows his channel thoroughly, and the *Queen* steams on, and at the moment one expects the inevitable crash, when her prow is almost touching the rocks, she swings to one side in quick answer

Natives of the Glacier Country

to her helm, and we are in a wide reach of clear water, going ahead at full speed.

The beauties of the Inland Passage have been sung by many writers. The Rhine, the St. Lawrence, the Hudson, have their attractions; but there is a charm that is unique about this arm of the sea that threads its way along between the mainland and Vancouver Island; it is a river to all intents and purposes, and yet it has the sea salt in its air, and the spray from the swells as our ship rushes through them has a distinctive smart to it as it strikes the cheek. All too short is that run from Townsend to Sitka and return. Some one ought to build hotels at some of the Alaskan ports, and then one could take adequate time in making the trip; as it is, the whole voyage is too limited to be properly appreciated.

The fourth day from Port Townsend we steam into Wrangell. There is an air of departed glory about the place; it was at one time, during the Cassiar gold excitement, a place of importance but now it is absolutely dead.

Sitka is beautifully located on Baranoff Island, on a little flat between the waters of the bay and the mountains. Across the bay, immediately opposite, lies Mount Edgecombe, an extinct volcano, now enveloped in snow.

The Russians have left besides their names, a castle at Sitka, known as Baranoff Castle. It was the Governor's residence in the old days, but is devoted to much baser uses now. Sitka, being the headquarters of the Alaska Company and the seat of Government for Alaska, is the most important of all Alaskan towns. The Indians are confined, as to residence, as much as possible, to a portion of the town known as the Rancherie, but they infest all parts of it when they go forth to beg, or trade their native bead work and wood carving, with the tourist for about ten times its value. By far the most interesting of all things Sitkan, is the Russo Greek Church, the ornamental work of the two altars being very beautiful, as are the paintings which are in oil and are numerous. Who painted them, no one seems to know. After one has examined the church,

Face of Muir Glacier from the Morain

Crevasse in Muir Glacier

made a pilgrimage through the Rancherie, and "done" the curio and photograph shops, one has finished Sitka.

Our course was through the islands known as the Sitkan Archipelago, and a very lovely scene lay all about us. The islands are forest clad, lying so closely together sometimes that one could almost throw a stone from one to another, but there is deep water everywhere from island to island and we steam between them in perfect safety.

We are heading for Glacier Bay, and if the weather holds clear, we shall see a glacier at sunrise. There is no night away up here and I kept the deck save now and then going below for a cup of coffee. I shall never forget the experience, which had something so weird and uncanny, and yet so superbly beautiful about it all, that the memory of it will remain fixed as long as memory lasts. Along the sky line is a glow of golden light, the glow left by the setting sun, but here it remains all night long until paled into nothingness by the stronger light of the aurora rising. Here and there this golden arc of light is broken by the snow-capped peak of some mountain, and the snow lies pink where the light touches it. The aurora reaches from sky line to zenith, its pale lances shaking loose their banners of palest pink, gold, green and blue, every now and then, but over all is that ghastly daylight in darkness that seems almost cold to the touch as one steps into it from the warm, lamp-lighted saloon of our ship.

Side View of Davidson Glacier

The Face of Davidson Glacier

At dawn we sighted ice and now we are in Glacier Bay, making directly for the Muir Glacier, which lies at the head of the bay ; fortunately, melting bergs are not thick enough to make rapid steaming dangerous, and as the eastern sky grows palely alight, we can see on the horizon in front of us a great colorless mass. This is the Muir Glacier, a stupendous piece of Nature's handiwork—impressive, grand beyond all expression. The glaciers of the Alps, so famed, are often dark, soiled and dirty. Here is the virgin ice. A massive wall, scintillating in the light, with the hues of the rainbow ; now an intense blue, green, yellow and gold, now flashing as white as snow can make it ; a frontage of divine conception, a wall of ice three miles wide, a thousand feet or more in height from the bottom, from two hundred to at times nearly five hundred feet in places, above water, moving on with resistless force into the bay at a rate of forty to sixty feet a day, a river of ice, frozen dead in the grasp of winter, an offering of the mountain gods to Neptune, a stony stream whose volume cannot be appreciated by human mind, an evidence of the power of the Maker, before which man stands, insignificant and astounded. For many years the great glacier has been known to the Indians, and possibly it was observed by some of the earlier white adventurers, but one day, John Muir, a California writer and naturalist, was rowed up to its face by a native, and it was through him that its wonders were first given to the world, and most fittingly it bears his name. Since its first discovery it has been examined by many scientists and hundreds of tourists have ascended its slopes and gazed with wonder into the deep caverns, which lead down into its blue heart. The length of Muir Glacier is estimated at forty miles, its greatest width at twenty-five, but as it approaches the sea it enters a rocky ravine formed by two ranges of mountains, and the entire mass is compressed into a narrow gulch about a mile across, through which it grinds and pushes on, as it has for untold centuries.

There were caves and grottoes in the face of the glacier alive with an intense silvery light, reflected from every possible angle, that positively dazzled one's eyes. As we looked, the ice was broken into semblance of masses of building of all sorts, from Indian tepsie to Grecian temple—here a Norman or Gothic cathedral of Titanic size, there a reproduction of the Parthenon or the Tower of Pisa in amethyst granite of an almost transparent clearness.

Some of our party were content to watch the glacier from a distance. Most of us took the boat and were landed, and began the ascent of the glacier, and after a most tedious climb, stumbling over ice, snow, mud and soft gravel, passing dèbris from the distant mountains, we reached the summit and stood upon one of the mightiest ice fields in America, and for that matter, in existence—stood upon a platform comprising 1200 square miles of blue ice, tipped with gleaming snow.

Away to illimitable distance we seemed to look, imagining the ice river, with its fifteen or more tributaries, winding down to form the mass upon which we stood, and spreading out as far back as the eye could reach to a width of twenty-five miles. The scene over this frozen sea was impressive in the extreme. I have no comparison to make. Every weird conception of the mind seemed to be pictured here in frozen shapes that, as they move on, are broken, hurled to the surface, twisted out of shape. Here and there the mass is riven with huge crevices—chasms which descend to unknown depths, into the very heart of this moving monster.

The thought of falling into one of these mighty caverns and of being closed up in the bowels of the moving ice was far from pleasant. I thought I

could see the curious blue bands, the ribboned-like characteristic of glaciers in some, and from one deeper than all into which I peered, I fancied I heard the rushing of water, a grinding sound and strange noises from the soul of this frozen monster. From the summit it was ice everywhere, reaching away in one direction, and up to the mountain sides in the other, where I could see the grinding footprints of more ancient glaciers. The surface was an icy chaos, altogether unpleasant; the surface cut and distorted in every way—a sorry pathway for even the scientist. From the top, looking down upon the bay, with its floating bergs, and the steamer, one obtains an idea of the actual vastness of the mass of ice upon which he is standing, where it is, say, four hundred feet above water, while below the surface, scouring into the mud and bottom, ploughing its way into the Pacific, is six or seven hundred feet more of ice, invisible to the eye. It is this bath, which the glacier takes, that forms the iceberg. As the enormous mass enters the ocean, it is in some cases, lifted up and broken off from below. Again enormous masses topple over and fall into the water, in either case giving birth to an iceberg, which sails away to become dissolved in the waters of the Pacific. The severing from the parent mass is accompanied by loud detonations, sounds unlike anything else, weird and strange to the ear, startling in their distinctness. Now the entire front of a pinnacle topples and falls with a mighty crash, causing waves which come rolling along, tipping the big steamer as if she was a small boat.

On the return, as we were approaching the ship, a gigantic mass of pure ice as large as the *Queen* rose from the depths, shooting upward like an apparition, sending out large waves in every direction, demoralizing every one, suggesting that accidents might readily happen here, as a berg of this proportion, coming up from a depth of seven hundred feet, would lift a steamer out of water and roll her over, crushed and helpless. The position of the various glaciers in this vicinity is well shown in the accompanying map: Muir, with its many feeders, some reaching down into Glacier Bay, Davidson Glacier in Chilkat Inlet, Eagle, Auk, Taku in Taku Inlet and others, to which I will refer in a following paper.

The Muir Glacier, according to authorities, at one time must have filled the *whole of the bay*, for not only is the monster advancing at the rate of forty feet per diem, but it is also receding faster than it advances, and at some far-distant epoch of time the valleys of the Muir and the Davidson will know them no more than do the Sacramento or the San Joaquin know their progenital glaciers to-day.

Prof. S. Frederick Wright gives as his opinion: "That early in this century the ice of the Muir Glacier filled the inlet several miles further down than now and 1,000 or 1,500 feet above its present level; that there are 1,200 square miles of ice in it and the amount of water passing, in one form or another, from the glacier in a year is 269,632,640,000 cubic feet. Of this amount 77,088,000,000 feet pass in the form of ice and 335,473,236 feet of sediment."

The glaciers can only be appreciated by a longer stay than is afforded by the steamer; the enthusiast could spend weeks here studying the great ice forests from various points.

BY EUGENIA K. HOLMES

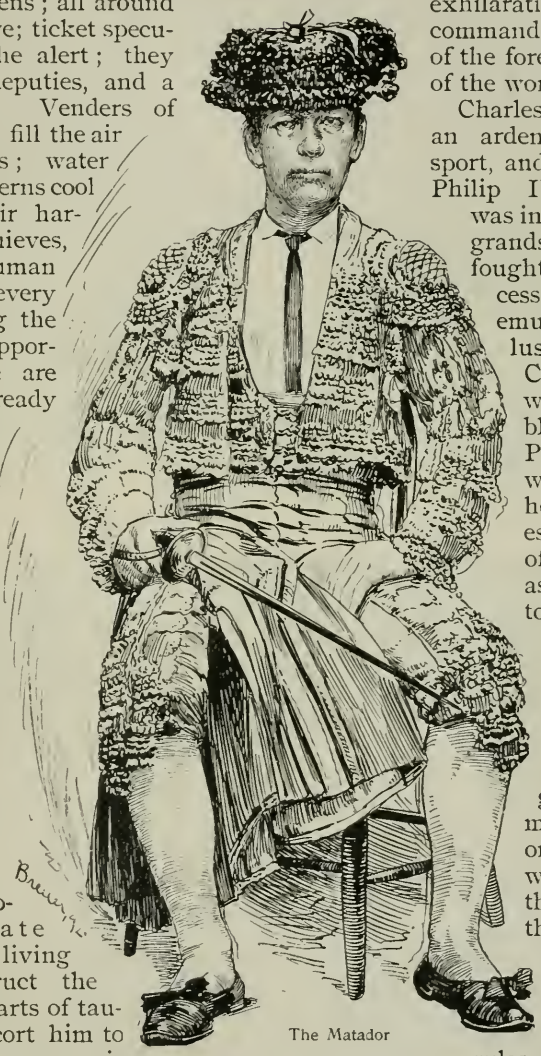
WALLS, many arched, tiled, chiseled, balconied, garmented with green, gardens with trees like the elms in a druid forest, fountains splashing in sculptured stone, walks that lead through rainbows of blended bloom, churches domed, spired, bell-hung, furnished with conquestorial trophies, palaces that recall the bastions of titan homes, lakes shimmering in floods of whitened sunlight, volcanoes wreathed in a purple haze, a chain of encircling mountains, curving and melting into mists of turquoise and gold, streets retrospective of battles, sieges, slaughter, paved with pointed cobblestones, lined with facades of frowning gray, swarming with sad-eyed, swarthy-skinned burden-crossed humanity, clothed in rags, devoured by vermin, clamorous for coin. *Estamos en Mejico!* (We are in Mexico.) Moreover, we are in the ancient Aztec capital—"glorious, gory Mexico." It was Sunday. A day of feasts and fêtes to the rich—of triple toil to the task-trammeled poor.

What should we do, we few forlorn foreigners, sequestered in a strange land? There is no lack of entertainment in that storied city; but, ah! to choose!

The lovers of the party suggested La Viga. There are gondolas on La Viga curtained with the national colors, cushioned with fragrant reeds, steered by skilled craftsmen, whithersoe'er the stranger wills, in those cypress-shadowed shoals, past the famous floating gardens, redolent with unnumbered roses, beneath lichen-hung bridges and abandoned causeways, mutely eloquent of a brilliant, barbaric past. Here, too, are beings fantastically appareled in feather-woven zarapes and wreaths of poppies. But *La Viga*, as a Sunday resort, is not sanctioned by the United States Consuls and so the gondolas remained moored in their many-arched waters that day; at least, so far as one small party of Amerécanos were concerned. But people who forswear Venetian barges, foliaged canals, floating gardens and views of crumbling *Casa Grandes* must be amused, and the edict of this exclusive class is the bullfight; (though why the butchery of bulls should be more genteel than gazing upon the beauties of Nature, is not quite clear;) however, there is contagion in custom. To the *Fieste de Toros* we accordingly went.

There are two *Plazas de Toros* in the City of Mexico: one in the vicinity of San Cosme, the other near the northern end of the Paseo, that famous, much-frequented boulevard, lined by noble trees, graced by garlanded glorietas, statued by men celebrated in Spanish and Mexican history. A long line of carriages darkened the drive and fluent crowds clustered so closely about the whirling wheels that a collision, at certain stages, seemed imminent. Uniformed gendarmes from the Federal District, with revolvers at their belts and clubs in their hands, succeeded, to some extent, in maintaining order. Greasy, wrinkled creatures, clothed in untanned skins kept pace with the coaches. They

stop, and a scramble ensues among this slimy fraction of the great unwashed, for the honor of swinging open the doors, which secures for them the few centavos expected for this service. We are at the Amphitheatre. The crowd thickens; all around it is a perfect hive; ticket speculators are on the alert; they have need of deputies, and a hundred hands. Venders of fruits and dulces fill the air with their cries; water carriers from caverns cool are reaping their harvest; beggars, thieves, destroyers of human confidence in every form are making the most of their opportunity. There are also guides in ready attendance, who, for a stipulated sum, will conduct one to those mysterious precincts behind the barriers, sacred to the gladiators and their associates, thence to the dark enclosures where the doomed brutes are confined. Here, too, are their co-workers—the interpreters—who profess to translate every language, living or dead, instruct the stranger in the arts of tauromachy, or escort him to the chapel, where mass is celebrated for the *toreros* who go there to pray, confess, and be absolved before confronting the bulls.



The Matador

Baletos de Sambre (shade tickets) were secured (tiny rolls of tissue paper resembling homeopathic powders) and we pass into the domain of chivalry, as practiced by the Castilian nobles, who likewise welcomed the auto-de-fê and the perfume of burning flesh; yet bull fighting, bloody and brutal, as it may seem to dwellers in Northern latitudes, is an art so intricate and exhilarating as to have commanded the attention of the foremost sovereigns of the world.

Charles V of Spain was an ardent lover of the sport, and in the reign of Philip IV, tauromachy was in its zenith. The grandson of Philip II fought with much success in the arena in emulation of his illustrious ancestor Charles V; but it was a young nobleman named Pedro Romero, who bears the honor of having established the art of tauromachy, as, up to his time, toward the end of the eighteenth century, bull fighting was simply a savage butchery, devoid of that grace of movement and extraordinary skill, which now forms the chief charm of the spectacle.

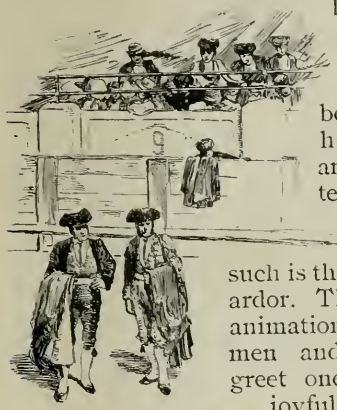
Pedro Romero compiled for these performances a set of rules which became the standard code of the combat giving at the same time practical instructions to his contemporaries in the principles of the art by a heroic exposure of his own life, with such effect that his name endures in the annals of the arena, as that of the

The Hidden Sword.

Directing his Attention

most illustrious of the *espadas* of Spain.

The history of bull fighting in Mexico is but another chapter in this strange and singularly fascinating sport, for there are ladies who dream of it, ministers who neglect their affairs for it, laborers who sacrifice their *cigarritos* to save a few rials for the day of the fray. It begins at three o'clock, but long before that hour the amphitheater is compactly filled, such is the national ardor. The utmost animation prevails, men and women greet one another joyfully, frantically, after the fashion of the effusive Southern race; fans are fluttering, heads are nodding, arms are gesticulating, the varied colors, the mantillas, shawls, zarapas, parasols, the murmur of many voices, all contribute to the general gayety.

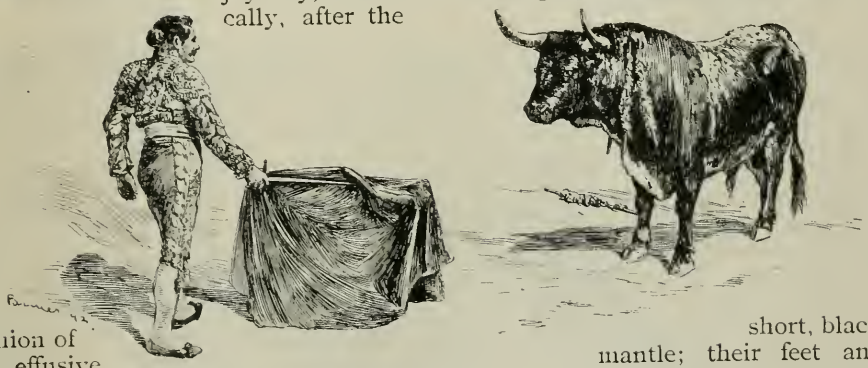


The amphitheater, divided by silver sunshine and sepulchral shade, is encircled by seats in boxes, balconies, and tiers, priced according to location; those in the sun are inexpensive and occupied by the poorer classes.

The arena is similar to a circus ring in the United States, though much larger, enclosed by a barrier about six feet high, separated by a narrow passage from another barrier, still higher. The first barrier is leaped by the performers, sometimes by the maddened bulls.

Four roads, nearly equidistant, lead to the ring: one for the *toreros*, one for the bulls, one for the horses, and one for the heralds of the show. Above the bulls' entrance is a balcony, where sit or stand the members of the municipality, who give the signals, blow the trumpets, and superintend the ceremony. Each entrance of the performers is announced.

A signal from the band first warns the assembled spectators that the exhibition is about to begin. The sea of heads is stilled, the sound of voices is no longer heard, every eye is strained, and this is what they see—six horsemen mounted upon steeds, showily caparisoned. On their heads are plumed sombreros. At their sides are swinging swords. Each wears a short, black mantle; their feet and lower limbs are encased in yellow leather, spurred at the heel. Slowly they make the circuit of the arena. When they take their positions, each face is turned toward the President's box; two by two they halt before the door of the toril, still closed.



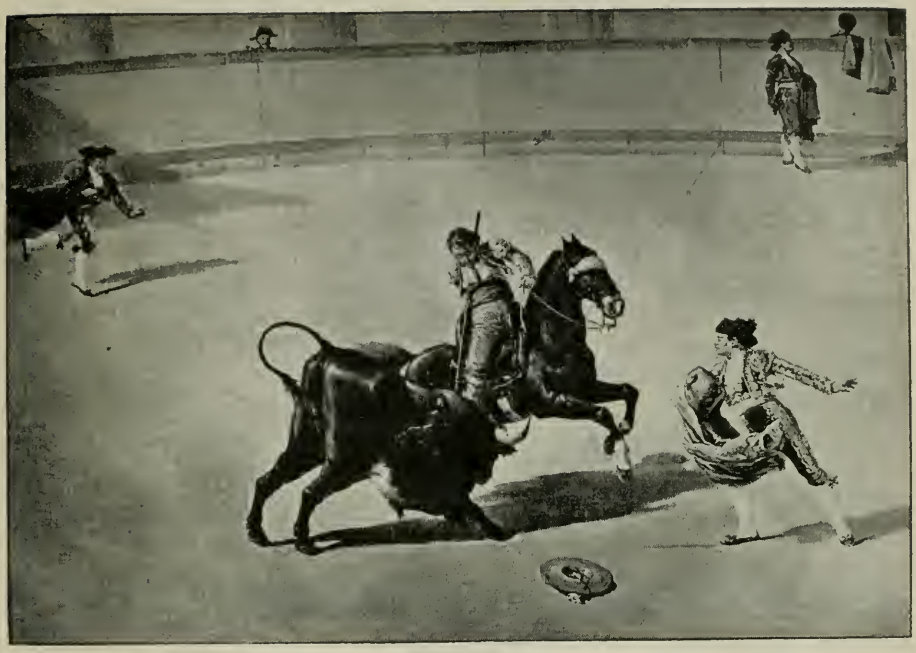
The Challenge

The band booms on, another door opens, another trumpet. It is the signal for the cuadrilla (company of bull fighters). First come the two prima espadas (star bull fighters) dressed with imposing

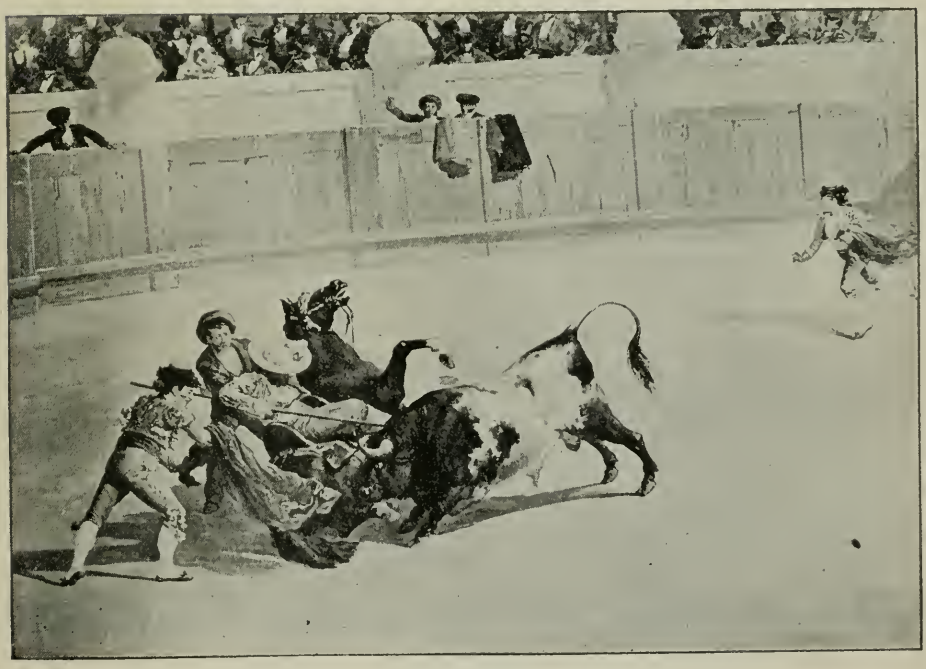
effect. Elaborate embroideries completely cover their closely fitting jackets, short at the back, cut away in front, fringed, tasseled, filagreed at the shoulder, spangles seam their scarlet knee breeches, yellow silk sashes, fringed at the ends girdle their loins, flesh-colored silk stockings and satin slippers envelop their shapely extremities, capes of vermilion velvet, richly corded and tasseled, a queue of netted hair, pomponed turban, bound with black fur — the toreros' Tam O' Shanter — completes this striking costume.

After the espadas come the banderilleros and capedores, similarly, but less richly arrayed; then the picadores on horseback, carrying long lances, wearing buffalo-skin trousers, quilted with strips of iron for protection against the tora's thrusts. The Chulos bring up the rear. All are finely formed men—compact, sin-

A Daring Leap



Goring the Horse

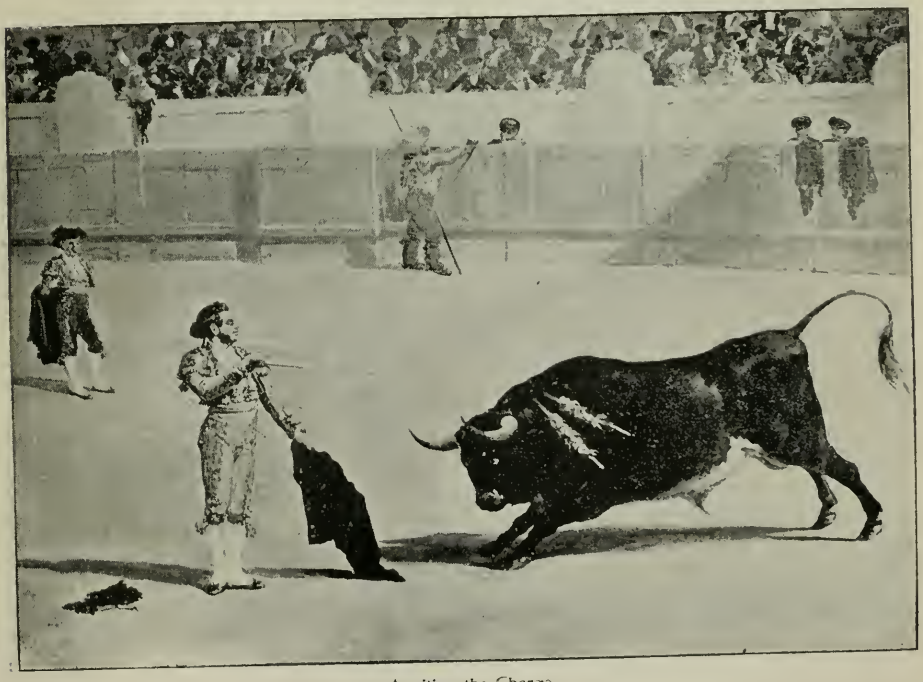


The Bull Wins

ewy, lithe, with dark faces and large, lustrous eyes. They, too, assemble before the President's box. They salute him with the grace of trained gladiators. The key of the toril is then dropped into the ring. A guard picks it up and stations himself in readiness to open the door. The espadas separate, the Chulos prepare their cloaks, vivid as the first rays of the morning; the banderilleros secrete themselves behind the barriers; the picadores adjust their lances; again the signal; the door of the toril is then flung open. A tumultuous shout issues from thousands of throats, as a black monster, with red, blazing eyes, cruel, crescent horns, thick, ropy neck, pricked and bleeding from a spiked ribbon rosette, shoots into the arena, doomed, though he be, to butchery, prolonged and ceremonious. No prima donna, with the voice of a nightingale and a reputation Continental, ever was the recipient of wilder applause. A Chulo waves a provoking cloak; the bull makes a dash at it. In a twinkling, the agile Chulo is behind a barrier. The particular business of these acrobats is to irritate the bull, by waving the bright flags in his face. Bewildered, stunned, but superlative, he sweeps upon a picador, and raising him, horse and all, flings him down into the dust. "*Bravo, toro!*" shout the spectators. "*Pobne caballo!*" murmured a mellow-eyed senorita near me, behind her fan.

The Mexicans are a strange mixture of sympathy and cruelty. The picadores are the first to receive the attack of the bull. With their long lances planted firmly between his horns, they attempt to ward him off. If they do not succeed in planting them, the bull thrusts his horns through the horse, and the picador falls with his vanquished steed. While the bull is extricating his horns, the capadores come forward, and wave their capas across his eyes, to attract his attention, causing him to follow them, and to

Playing with the Bull

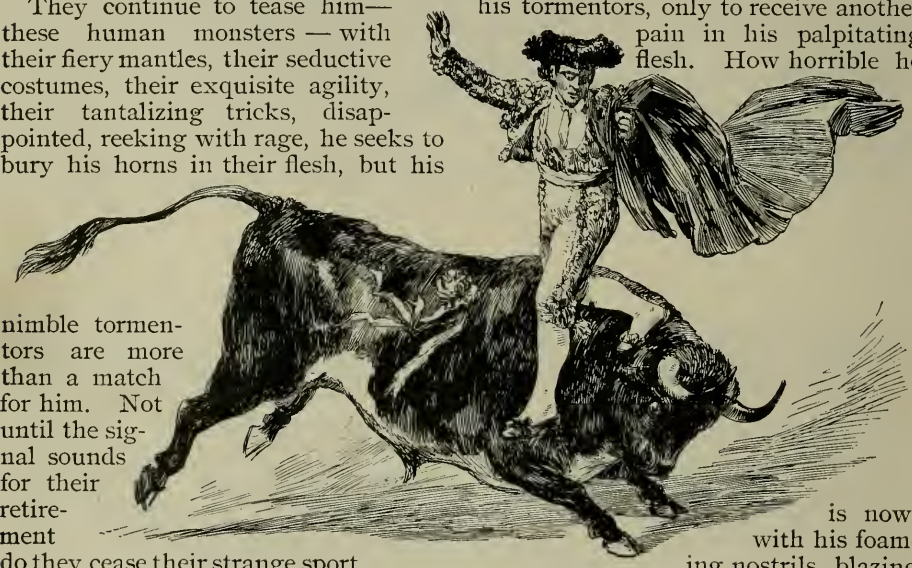


Awaiting the Charge

save the fallen cavalier, whom the Chulos assist into his saddle. If the horse has the strength to stand, he is again attacked and disembodied. Otherwise he remains reeking in his bath of gore until kindly death comes to his deliverance.

Of all the participants in this barbaric tournament, none merit so large a share of sympathy as do those spavined, knock-kneed, old, blindfolded, utterly defenseless nags, fated to the most frightful death, without even the ghost of a chance of resistance. Man, of all animals, is the only one that preys upon the defenseless.

They continue to tease him—these human monsters — with their fiery mantles, their seductive costumes, their exquisite agility, their tantalizing tricks, disappointed, reeking with rage, he seeks to bury his horns in their flesh, but his nimble tormentors are more than a match for him. Not until the signal sounds for their retirement do they cease their strange sport.



Then the banderilleros appear upon the scene. It is the office of these gentry to plant barbs in the neck of the bull. These barbs are about a yard in length, ornamented with parti-colored paper, furnished with a metallic point, and so made as to render withdrawal impossible, when once stuck into the flesh. The pierced animal, struggling to free himself, only drives them further in. This is most exquisite torture, and yet six, eight, sometimes ten pairs are planted, causing the blood to cover the victim like a purple shroud.

The ambition of the banderilleros is to place these prongs evenly and symmetrically, one on each side of the vertebra. For this feat, great agility, firm hands and perfect accuracy of eyesight are required. If they fail, they will be pierced like the poor horses.

The code of Somero decrees that the performers must stand not more than fifteen paces in front of the bull, without flag, lance or sword, and await the attack. Infuriated, he rushes at them. As the head is lowered, the banderillero makes his thrust, and then steps neatly aside. Now frenzied with resentment, the bull turns upon his tormentors, only to receive another pain in his palpitating flesh. How horrible he is now, with his foaming nostrils, blazing eyes, writhing tail and reeking back, while above—"picture it, think of it"—is the tender blue sky and a few fleecy clouds. Here was heinous work in the face of heaven.

Again the signal! The spectators have been sufficiently entertained by the banderilleros. This only is the excuse for their forbearance. It is then that the hero of the hour, the prima espada, appears upon the scene for the final feat.

With the dignity of a despot, the apparel of an Asiatic prince, a two-edged toledo blade and a flaming muleta, (flag) he advances to the

center of the ring, removes his turban, bows first to the President, then to the populace, raises his sword, kisses it, and in a clear, distinct voice asks permission to kill the bull.

"You may fight him," answers the President. He greets the honored privilege with a gracious smile, a gentle inclination of the head. "One of us must die," he says, with heroic humility which becomes him well, then he crosses himself, and invokes the protection of his patron saint. He has need, for here is an animal of enormous strength, ferocious, bleeding, maddened by prolonged pain, bellowing for revenge, and a man, seductively dressed, alone, defenceless, save for the sword in his hand. He has need of skill, courage, pride, perhaps the prayers being breathed for him; for his *quireda* (sweetheart) is up there in the balcony above, with her glittering eyes upon him. The strained glances of thousands are concentrated there. Not a voice, not a whisper is heard.

The audacious espada provokes attack by waving his *muleta* before the bull, across his very eyes, who dashes at it, hits the cloth, and strikes empty space. He has stepped aside in the nick of time, the horns barely grazed his hip. "*Bueno, bueno,*" yell the sunny side. The shady side contents itself with handclapping. The *quireda* in the balcony snatches her bouquet she wears in her corsage and throws it at him; more bouquets follow, more handclapping, bets are made, and money staked. The toreso has done what man can do in that radiant land to commend himself to the favors of the fair, for these fellows can enslave hearts as well as slay bulls. Seven times by the dextrous use of his flag, the espada invites attack from the fierce beast, and seven times, by a dainty movement he averts death. Suddenly he ceases this seeming by play, and takes aim straight into the great eyes of the wondering animal, goaded to the extremity of desperation by these varied types of torture. His nostrils emit a vaporous mist, his swollen tongue protrudes, about his hoisted

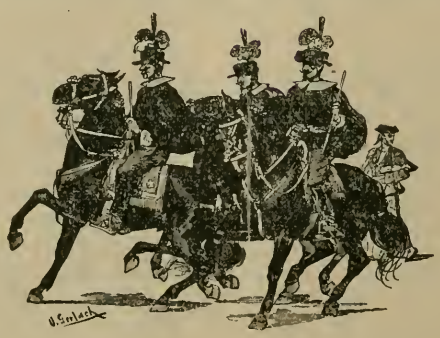
The Dying Matador

horns and wrinkled neck there is blood — blood in blotches, rivulets, wreaths. Every neck is craned. Opera glasses are adjusted, fans have ceased to flutter. Upon every countenance anxiety sits enthroned. The vast audience, tumultuous in less perilous feats, is now petrified. Again the beast dashes at the man, but this time he does not step by—he lifts his sword. It is the *coup de grace*—(dagger of mercy), and it falls in a flash of silver sunlight, over the horns—lowered for the last time—down through the quivering flesh, and bloody vertebrae, to the vital spot. At the feet of the conqueror he falls—dead.

It is the supreme expression of skill exacted from brute force. Then there was a shower of canes, hats, cigars, an avalanche of flowers, kisses, coin. Men shouted, stamped, applauded wild with delight. Women waved their handkerchiefs, *mantillas*. A hurricane of hurrahs greeted the victorious gladiator, who bows and smiles and poses and rests upon the hilt of his sword, which he has drawn from the wound, and wiped with his *muleta*, torn and smeared by the combat. His adversary has fought valiantly, but to the victor belongs the spoils. "*Quesoloden*," shouts the populace (give him the bull). He bows again blandly, with the grateful grace of a Talma. Then he stoops and cuts the right ear of the dead animal, that it may be designated from others in the slaughter-house hard by, and amid vociferous, delirious applause, retires from the arena.

The band which has been dispensing rapturous strains suddenly changes to a dirge for the dead *toro*, now being drawn out by four mules, showily decorated, with tinkling bells, feathers and flags. The most important actor in this singular tragedy is then skinned, cut, sliced and sold, the proceeds of which, in this case, went to swell the receipts of the triumphant *matador*.

When six or eight animals are similarly slaughtered; when the arena is scattered with smoking intestines, bones, bits of flesh, blotches of blood and other remnants of the vanquished; when the bats and kindred nightbirds that lodge in holes among the loftier altitudes of the amphitheater have scorched their wings by the flaring lights substituted for the sun; after his daily voyage across the beautiful valley is ended, and the still, white stars look down—the show is over.



AT THE DRY TORTUGAS DURING THE WAR

A LADY'S JOURNAL

(*Commenced in January number*)

[The history of the late war has been well treated in various publications, but that portion relating to the famous Dry Tortugas prison, where thousands of men were kept during the war, and where those connected with the assassination of President Lincoln were confined, has never been described, yet the events are now of great historical value. The island upon which the great prison was established was a sand band comprising but thirteen acres, — one of the last of the keys representing the end of the great Florida reef. For seven or eight years a lady, the wife of one of the surgeons, lived in this isolated spot and viewed all the incidents from the appearance of the first war cloud until the declaration of peace. The following chapters were not written or intended for publication, the events being jotted down simply for friends in the North; and THE CALIFORNIAN has been enabled to give them to the public in a series of chapters, believing that many are of historical interest and value, and also as showing the singular life of a lady in one of the most out-of-the-way spots in this country.]

THE extremely hot season warned us to be cautious on account of yellow fever, which was always lurking in Havana during the summer months, and was even now raging there. My husband enforced a strict quarantine, and our mail, which was brought via Havana by a small vessel, was deposited, sometimes on the end of a long pole, on Loggerhead Key, on which stood the lighthouse, previously mentioned, the schooner *Tortugas* going there for it. Upon her return the surgeon boarded her before she came to the wharf.

News from the North had been depressing for some time, and the rumor that McClellan had been driven back from Richmond was discouraging to officers and men. To add to our trials sickness appeared among the soldiers and families.

The steamer *Union* came into port one day with papers up to the 23d of July, and was put in quarantine for ten days—a tantalizing proceeding. The papers spoke of Halleck in command but no mention of McClellan. We lost so much of the news that it took us a long time to fill up the gaps, and the officers became daily more impatient.

Soon after this a vessel came in with guns; another in distress, and one morning we saw on the horizon a steamer evidently in chase of another; but we could not make out which bore our colors, or whether it was a capture or an escape.

The yellow fever had broken out in Key West, and every precaution was taken to prevent its obtaining a foothold in our little garrison. Even our mail came wrapped in a cloth saturated with lime. An order now came for Dr. Hoffman to go to Key West to aid the sick, and by the next boat we heard that our friend, Captain McFarland was ill with the dreaded fever.

The yellow fever raged for two months in Key West; the entire city was a vast hospital, and there were two hundred deaths within four weeks from the dread disease. The one death at Tortugas, if it was genuine yellow fever, was a sporadic case, as there was no other until later in the season, and we refrained from giving it that name.

Many of our people now came down with a sort of intermittent or "break-bone" fever; rightly named, for my own sensations were that the bones were being crushed, and the pain was veritable agony. It went through the families and among the men and soldiers. The list of the well, my husband said, was easier given than those who were on the sick report. His duties were now extremely arduous. Besides being post surgeon he was health officer, and was rowed long

distances in his six-oared barge under a torrid sun to visit every vessel that approached. All felt that their safety was in his hands and that his careful watch and strict enforcement of the quarantine would result in our exemption from the scourge. He was obeyed implicitly, and for a time we escaped the fever, but the "break-bone" singled us out one by one, and several times alarming symptoms of the dreaded yellow fever appeared. My husband was very ill, but he never gave up, and said, laughingly, "that he could not afford to be sick with so many in the hospitals." The doctor who had been sent down from Key West to take Dr. Hoffman's place was evidently too ill with consumption to ever do duty, so Colonel Tinelle sent for another surgeon from Hilton Head; but some time elapsed before one came, and if my husband had succumbed meanwhile I do not know what we should have done. The war news that reached us now was most depressing, and had its effect on both officers and men, especially as it might be weeks before we could learn the result: "Thirty thousand confederate troops within eight miles of Washington and thirty miles of Cincinnati." This created intense excitement, and finally one day we had to acknowledge that the yellow fever had come; how, we knew not; only the "break-bone" fever, seemingly its first cousin, grew worse and worse, until finally it merged into genuine yellow fever. There were five deaths only, in these sad days that oppressed us like a nightmare; then, mercifully, a norther came and the spectre disappeared. We now had several showers, and gradually people began to pick up courage and take heart again.

During all this time we could not obtain a servant at any price. The only assistance we had was a boy from the hospital force, who came at odd hours to aid me. Our larder was again at low ebb, but in the midst of this a vessel came in bringing some Bermuda potatoes and onions at seven and a half dollars a barrel, and we feasted regardless of consequences and cost. We had not seen a fresh vegetable for so long we were famishing for them. Another vessel arrived with cattle, and we were allowed fresh beef twice a week and mutton semi-occasionally.

Most vessels passed us as well as Key West, by, fearing the fever, and we longed for news and the sight of cheerful faces. The flag ship, in command of Captain Ralph Chandler, was the first ship to visit us, and with Captain Van Syce of the gunboat, *Sunflower*, brought a bit of life and sunshine that was really the beginning of brighter days.

Captain McFarland, who had recovered from the fever, was ordered to Hilton Head as soon as he was able to go, and Doctor Hoffman came down from Key West for a visit, bringing the chaplain, and we had the first service for many months. The mercury now went down to seventy-four degrees, falling thirteen degrees in a few hours, and the contrast was so great, we were shivering with closed doors, almost wishing for fires. It was a decided norther and purified the atmosphere, which had been damp, hot and muggy for so long that we felt as though the air was poisoned.

We invited Doctor Hoffman to stay with us, and he put his contraband—a six-foot black boy—in the kitchen, while my sister and I played hostesses for awhile, heartily enjoying the rest; for although the other ladies were in the same helpless state regarding servants as ourselves, the old adage of "misery likes company" did not make the condition of things any easier to bear, and we were thoroughly tired out.

This boy Joe said he was the first slave who left Florida to join the Union. He had a good master, but he sent his slaves into the interior of the State when the war first broke out, and he, with another boy, ran away, taking a little rowboat with a sail, and started from St. Augustine to go

to Key West, nearly six hundred miles. The first night out, a storm drove them on to the rocks, and all the provision they had for the remainder of the trip was what they picked out of the water and swam ashore with. Leaving it on the beach, they walked six miles, swimming two rivers, to get back to St. Augustine. They then took the only remaining boat and started again, picking up their provisions on the way.

They put out to sea, taking the north star for their guide, but were four days and nights without food. When they reached Key West, they were of course very weak, but Joe, as soon as he was strong enough, went to Hilton Head, where General Hunter made out his free papers. He then returned to St. Augustine and brought seven of his relatives to Key West, where he started them housekeeping, while Doctor Hoffman took him as a servant. We all thought Joe had earned his liberty and that he would take care of himself as a freeman.

The question of the freedom of the slaves was already beginning to show the strength of patriotism among the people who had been warm Unionists, and we could see the seeds of discord sprouting in the minds of all those who had bought slaves to work for Government as a source of income for their owners.

It is strange how many people carry their principles in their pocketbooks. The preparatory proclamation of President Lincoln on the 22d of September, 1862, brought out all the sentiments of disloyalty which had been smothered until the alarm. It caused so much discussion that Colonel Tinelle issued an order that every one on the island except the soldiers should take the oath of allegiance. I wondered if it was taken by any one with a mental reservation, for had they not all taken it, they would have been sent away from the island.

The adjutant came around one morning for my sister and I to take the oath, which I fear was robbed of some of its solemnity by the fun-loving Doctor, who tried to invest it with as much mystery beforehand as though it were some secret society we were to join, forgetting that we had both been present when the men on the *Tortugas* took the oath. We promised, however, with becoming dignity and heartfelt sincerity, to be loyal citizens.

The chaplain told us of some very sad scenes during the ravages of the yellow fever in Key West, which must have been terrible to witness. Four paymasters and five surgeons died on the naval vessels, and it was very fatal among the sailors; four and five days was the length generally of the course the fever ran.

The chaplain spoke of one young soldier boy he was very much interested in, not more than eighteen years old. They thought him better and he went in to see him just before dark, and said: "Well, Johnnie, what shall I send you nice for breakfast?" "I want to talk of something else first," said the boy.

Then he told the chaplain that his father had been dead many years, but that he had the best mother in the world, and if he died he wanted the money between the beds sent to her with his clothes; and would the chaplain write her a letter? All of which he promised to do. Between six and seven the next morning the steward knocked at the chaplain's door, saying he had a message from the boy. "What?" said the chaplain, "is he in a hurry for his breakfast?" "No," replied, the steward, "he died last night, and made me promise that I would ask you to write to his mother." The chaplain fulfilled all the boy's wishes, receiving a grateful letter in reply from the heart-broken mother.

The mails during all that dreary summer were very irregular. Col. Tinelle received a letter from his wife, who was in New York, saying that

for weeks they heard nothing from him, the dreadful reports in the papers of the yellow fever, when one day her little girl came running up stairs bringing five letters of different dates; no one knew where they had been.

We all felt the need of something, and as there was so little within our reach, we lacked, perhaps, the energy to suggest a remedy. I had been so frequently ill during the past four months it was discouraging. But one afternoon the three other ladies of the garrison came in, and under the influence of a mutual inspiration we held a council of desertion and decided for a week to leave our cares, and everybody that belonged to us behind, to enjoy Thanksgiving all by ourselves. The very talking about it, inspired us with new life. When our plans were completed, we called in the three husbands and the conspiracy was laid before them.

Whether they really saw that it would be the best thing for us from a sanitary point of view, or that five ladies with their minds made up were rather a formidable party to combat, we never knew, but they so heartily entered into the spirit of the thing, doing everything to aid us, we gave them the benefit of feeling we needed and deserved an outing.

They promised to be responsible for the safety of the children, for two of the ladies would have small ones to be cared for.

Capt. Ellis, of the schooner *Tortugas* was informed that the ladies were to be in command of the vessel the next trip to Key West; and he was to obey their orders to go and return at their pleasure. He had only one request to make, and that was that no other passenger should be allowed to go on that trip of the boat; that we should have it all to ourselves which of course was granted. All the command saw us off, our husbands waving their handkerchiefs from the ramparts as long as we could see them, while the six children stood in a disconsolate row.

We had a delightful trip with a fair wind, leaving at five in the afternoon. That evening Capt. Ellis brought us a box, saying he thought it belonged to us. It was directed "To the Merry Wives of Tortugas," and upon opening it, was found to contain some delicacies from the sutler, packed by our husbands, fearing we might be sick—a thoughtfulness we appreciated as well as the joke. The following morning we saw the sun rise out of the Gulf, as we sailed into the harbor of Key West. There were five naval ships in the harbor. As we passed the U. S. sloop *Huntsville*, an officer lifted his cap, standing uncovered while we passed, which, we thought, a good precedent. On another we saw an officer, whose curiosity overpowered his gallantry, take a glass to see, we presumed, what kind of an expedition Fort Jefferson had fitted out. Some little bird, perhaps the one that notified the wreckers of vessels on the reef, had carried the news that the ladies from Tortugas were coming to spend Thanksgiving at the Russel House, for before "King" had our breakfast ready, Mr. Russel came down and escorted us up to the hotel.

Three married, and two young ladies created quite a sensation in the little town which had not yet rallied from the effects of its sorrowful summer, and perhaps needed an outside stimulant as well as its guests. We knew nearly every one in Key West, and Mr. Russel must have felt that his hotel was the most popular place in it for the ensuing week. During our stay, we were taken driving by all who were fortunate enough to possess carriages, and invited to dinners, teas and lunches, where the Navy officers joined with those of the Army in every attention that would contribute to our pleasure.

Doctor Hoffman called the morning of our arrival to see if it were true that *Tortugas* was deserted. Later he took us to the hospital garden, where we sat under the trees among the beautiful flowers, where we would

have been content to remain all day. After dinner, there was a flag presentation by Captain Curtis, but visitors prevented our going to the grounds, and Colonel Morgan marched the troops down by the hotel, so that we could see them from the piazza. The officers at the barracks gave a Thanksgiving dinner for us, with the proverbial roast turkey and good things suggestive of the North, combined with all that a tropical country afforded. The menu was made with complimentary names given to the Army and Navy officers, and each lady had it as a souvenir stamped upon her handkerchief.

The officers of the 90th New York gave a ball for us, inviting the officers from the *Huntsville* and *Magnolia*, making a very gay affair.

Sunday we all went to church, expecting to return to Tortugas on Monday, but that night a steamer came in from New York, having on board Colonel Tinelle's wife and two daughters and Miss Carrie P——, who had been north for two years at school.

The captain of the steamer, who was going to Tortugas, invited us to go with them, and to add to what we thought had already been a brilliant week, Mr. Russel and the English Consul gave a ball at the hotel, inviting all our friends and the passengers from the steamer who were Army people. They danced until eleven, when we went on board, the band following us to the wharf playing, while we swung out into the stream, giving place to the *Bio Bio*, which had just arrived, having started twenty-four hours after the *Cahawba*, having on board Doctor Hoffman's wife.

We went into the wharf at Tortugas with flying colors, and the Colonel gave us a salute of seven guns. Our husbands boarded the steamer with the officer of the day, giving us a most joyous welcome. Colonel Tinelle came with them, not dreaming whom he was to meet, for his wife had not written him of her intended visit. I asked him if he did not think us successful at recruiting; absent only a week and bringing back four ladies from New York?

We returned to our quiet life, better in health and spirits, finding that the husbands had filled their position creditably during our absence, and satisfied that our trip was a wise measure and a grand success.

On December thirteenth, we were aroused by the report that several steamers were coming in and others in sight.

We expected that it must be for another change of command, and all was confusion, the people running to the bastion with glasses, for we could see the stars and stripes, and the band on one steamer was playing "Yankee Doodle."

Our anxiety was soon dispelled by the first steamer's announcing that all they wanted was coal, and the privilege of stretching their limbs on land awhile, and soon the fort swarmed with soldiers who devastated the bakery and went about peering into everything, evidently very much entertained.

They strolled about a few hours, then gave place to the next steamer. There were twenty-four vessels in all, but they did not all come in. It was General Bank's Red River Expedition. Other steamers followed every day until they all passed or came in; they were to rendezvous at Ship Island, when they would know their destination.

(*To be Continued*)

TENNYSON AND THE NINETEENTH CENTURY

BY LEWIS WORTHINGTON SMITH

IT goes almost without saying to assert that every man must be studied in the light of his environment. In the case of the ordinary individual, that means in general the associations, largely local, which have had an influence over him; but when we come to the study of one who has in any degree asserted an influence upon the thought and feeling of his time, we are compelled to consider as his environment all the facts and forces of his age. Except as he possesses himself of these facts and utilizes these forces, he will find it impossible to make himself worthy of consideration as one of them. That Tennyson has succeeded in stamping the impress of his genius indelibly upon his time is, we will then say, sufficient evidence of the fact that he is in some degree representative of modern, intellectual and artistic life. It is indeed true, as is evidenced by the remarkable success of the late E. P. Roe, that great popularity may be attained by one whose work, regarded purely as literature, is quite valueless, mediocrity being seemingly essential to great popular success; but to have won the attention of scholars, thinkers, and cultivated people the world over, implies abilities and acquisitions differing not only in degree, but in kind.

In any consideration of a poet the artistic character of his work must be the first thing to engage our attention. It is through the perfection of his forms and the beauty of his images that he wins a hearing. Without this the finest and noblest thought fails to please. These are attained in two ways: the patient labor of the one gives seven years to the elaboration of an "Elegy Written in a Country Churchyard;" the other flashes out into "Idyls of the King." The beauty of Tennyson's verse is not that which comes from polish, but rather from conscious power.

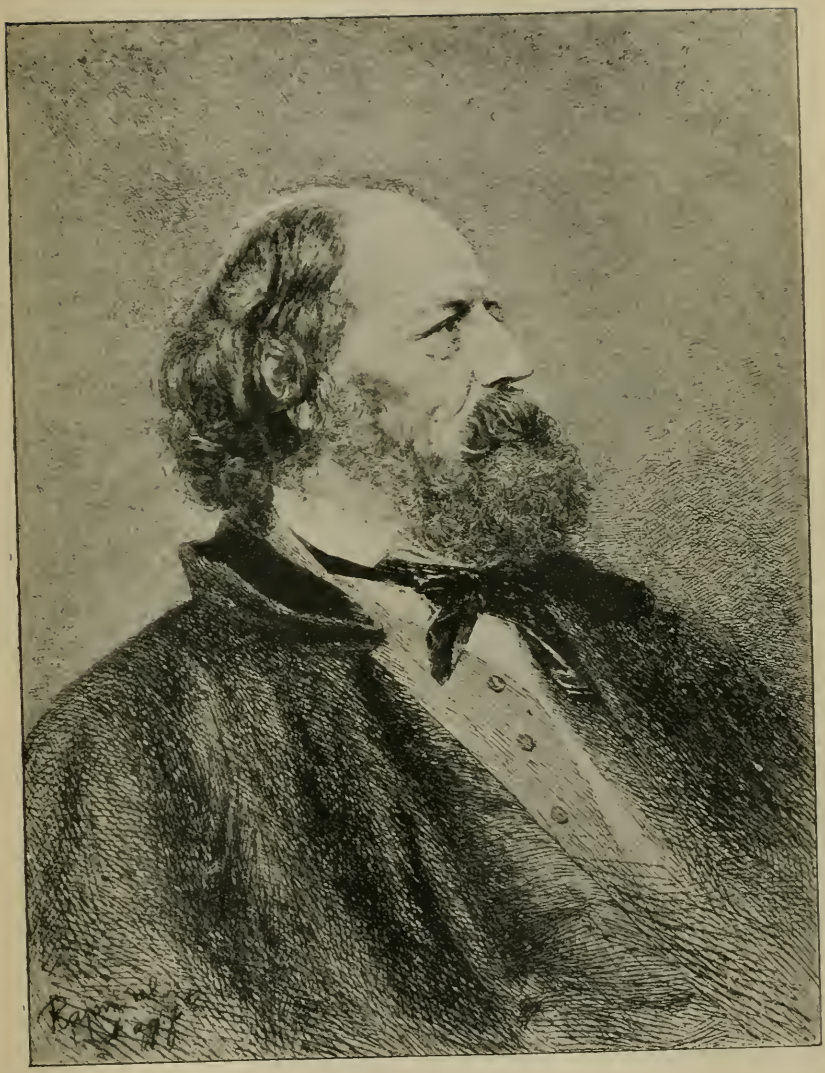
Perfectio of form has this element of endurance, that it appeals to a varied constituency such as might not be interested in the simple message which the writer has to deliver. Thus when the progress of thought has passed him by; has made his words things to be forgotten but for their beauty, this latter imparts to them a permanency which they might not otherwise have; for, however much man's thought may change, his love for the beautiful is an abiding possession. The artistic nature, though in widely varying degrees, is common to the whole race, and while it may continually develop, can never die.

Perfection of form must be considered, also, as including that unison of theme and its clothing; that harmony between what is told and the manner of its telling, which is the highest achievement of poetic art. Great as is the difference between a simple story such as our poet's "Lord of Burleigh," or that more passionately tender plaint, "Œnone," and such a production as his "Ode to the Duke of Wellington," or the "Defense of Lucknow," this difference consists as largely in the treatment as in the inherent differences of subject. What a contrast is presented by the almost sensuous luxuriance of Œnone and such lines as these from the Ode!

Bury the great duke
With an Empire's lamentation.
Let us bury the great duke,
To the noise of the mourning of a mighty nation.
Mourning when their leaders fall;
Warriors carry the warrior's pall,
And sorrow darkens hamlet and hall.

Note also the ring of these lines from the "Defense of Lucknow."

Hark! Cannonade, fusilade! Is it true what was told by the scout?
Outram and Havelock breaking their way thro' the fell mutineers!
Surely the pibroch of Europe is ringing again in our ears.



Lord Tennyson

All on a sudden the garrison utter a jubilant shout;
Havelock's glorious Highlanders answer with conquering cheers.
Forth from their holes and their hidings our women and children come out,
Blessing the wholesome white faces of Havelock's good fusileers,
Kissing the war-hardened hand of the Highlander, wet with their tears.
Dance to the pibroch—Saved! We are saved! Is it you? Is it you?
Saved by the valor of Havelock, saved by the blessing of Heaven.
"Hold it for fifteen days." We have held it for eighty-seven.
And ever aloft on the palace roof the old banner of England blew.

It is this versatility of expression, this capability of employing forms as varied as the sentiments he would voice that has made Tennyson perhaps the most widely read of poets.

Devotees of Browning may declare him our poet's superior, but the fact remains that his verse is not musical enough, has too little beauty of form ever to win for itself such an audience as is given to the singing of England's Laureate. We may concede to him an equal or greater interest for the philosopher or thinker, but it is pre-eminently the poet's mission to so beautify and adorn his subject as to make that which in sober prose might attract only the student, pleasing to the world in general. This Tennyson has done, and he is by that much greater than the author of "Paracelsus."

There is still another thing in which Tennyson shows his mastery of the poet's music. It is the ease with which he handles blank verse. There can scarcely be a doubt that unrhymed verse, depending solely on its rhythm as it does, is less readily made pleasing; but, on the other hand, it is, perhaps, the most perfectly poetic, from its very freedom from any reliance upon the mere trick of like-sounding syllables. As time and tune are to music, so are rhythm and thought to verse. The former's embellishments of expression find their counterpart in the latter's choice use of words. Rhyme is a superfluity that the master hand can do without. Of all varieties of verse, the iambic pentameter unrhymed may fairly claim the first place, and it is this that Tennyson most largely employs. In it he has written "Enoch Arden," "The Idyls of the King," "The Princess," etc.

When the world was young, or, rather, in the childhood of the race, the heart of man must have pulsed with some such sense of its great powers and possibilities as comes to the youth of every enthusiastic and great nature. When our ancestors in the dim centuries, thousands of years ago, stood in the virgin forests where the startled deer sprang from the covert, and the birds hymned their myriad songs, or looked with adventurous eyes over the tossing billows of seas, as yet unexplored; when their hearts were still virgin and satiety a thing undreamt of; when the "world was all before them where to choose," life must have been a grand thing and a great thing. Every line of Homer throbs with the expression of this feeling. The crash of battle was a joyous thing, the dangers of the sea were a delight. The world was fair on every hand because in it man could be and do.

In the present much the same thing comes to us, but it is the result of what we have accomplished, not what we feel that it is ours to do. New worlds are not waiting for our discovery; they have been discovered. The mysteries of the physical universe about us are not waiting for our unfolding; they have been unfolded. All things that can interest the human intellect have been explored almost to exhaustion, and we rest in the calm pride of this fact. We it is who are, in our poet's words, "The heirs of all the ages in the foremost files of time." As we find in Homer the expression of that earlier sentiment, so does this later one breathe in Tennyson. In the former there is the lusty vigor of young manhood; in the latter, the developed genius that goes straight to the mark with quiet confidence. How

far Tennyson's little beauty is from that of the mere polisher one need scarcely be told who has been in communion with the poet, but let us illustrate by a line from "The Last Tournament." The half-mythical Arthur, who is the principal figure throughout the "Idyls of the King," has gone to battle with the "Red Knight," who has drawn together a heathen "Round Table" to overthrow the organization of that name, of which Arthur is head and founder. Leaving his chief knight, Sir Lancelot, at Camelot, to conduct the tournament, at which injustice is open and unrebuked, and which ends in bitterness, Arthur himself leads his younger knights to battle, having a presentiment of the evil that is to come. He is victorious, but in the overthrow he recognizes the Red Knight's voice as that of one who once belonged to his own Table Round; and Tennyson ends the recital of this, his last victory, in these words:

So all the ways were safe from shore to shore,
But in the heart of Arthur pain was lord.

I know in all literature no other so beautifully sad expression of a like feeling. Its delicate directness can never be surpassed, and we apprehend that this sentence sprang full-fledged from the author's brain, nor could possibly be the product of patient study and polish. It has that charm "of woven paces and of waving hands," that the wily Vivien stole from the seer, Merlin. There are innumerable other ways in which this might have been said, and in some one of these a second or a third rate intellect would have said it, but in this way, genius alone can speak.

That we shall find in Tennyson all the various phases of modern life and thought; that he presents to us a many-colored picture of the day, it would be useless to contend. We may be lulled by such a stanza as this from "The Lotus Eaters:"

How sweet it were, hearing the downward stream
With half-shut eyes, ever to seem
Falling asleep in a half-dream;
To dream and dream like yonder amber light,
That will not leave the myrrh bush on the height;
To hear each other's whispered speech;
Eating the lotus day by day,
To watch the crisping ripples on the beach,
And tender, creamy lines of curving spray;
To lend our hearts and spirits wholly
To the influence of mild-minded melancholy;
To muse and brood and live again in memory,
With those old faces of our infancy,
Heaped over with a mound of grass,
Two handfuls of white dust, shut in an urn of brass.

We may be stirred by the tropical luxuriance of this from Maud:

She is coming, my own, my sweet!
Were it ever so airy a tread,
My heart would hear her and beat;
Were it earth in an earthy bed,
My dust would hear her and beat,
Had I lain for a century dead;
Would start and tremble under her feet,
And blossom in purple and red.

Or again, we may be carried away by the wild misery of Ripah, and know in our inmost hearts that here he is a master.

Before turning to the consideration of Tennyson from another point of view, attention must be called to the admirable art with which he has made the tale of mythic Arthur acceptable to a nineteenth-century audience. The story as it comes to us in the old legends is full of the supernatural, colored by the superstition of the time in which it sprang into being—superstitions, it need scarcely be said, with which we of to-day are in no degree in harmony; yet so cleverly has he draped that which would seem incongruous; so unerring has been his skill in naturalizing, if we may so express it, these fancies of that old time in skeptically analytic atmosphere of our own, that we are borne away into the region of the romantic unreality, without being conscious of having reached the border land. A reading of Sir Walter Scott's "Bridal of Triermain," or "Harold, the Dauntless," gives one, through the failure of his giant intellect, to accomplish the like result—some under-

standing of the art that has gone to the making of "The Idyls of the King."

However we may turn it about, the world's unrest as far as it is social, resolves back to this, to the feeling that there is general injustice in the apportionment of earth's bounties, and that in this, the age of the people, it should and must be remedied.

If we look at *Maud*, a poem which Tennyson is said to have founded upon personal memories, we shall find this feeling expressed in all its passionate bitterness. The hero begins his story with the recital of the death of his father, who, maddened by having lost his all in a speculation, either is killed by falling accidently over a precipice, or purposely dashed himself down there to death. The wildness of his grief is a measure of his wrath against the wrongs of the world, and breaks out without restraint into such lines as these:

Why do we prate of the blessings of peace? We have made them a curse,
Pickpockets, each hand lusting for all that is not its own;
And lust of gain in the spirit of Cain, is it better or worse
Than the heart of the citizen hissing in war on his own hearthstone?

But these are the days of advance, the works of the men of mind,
When who but a fool would have faith in a tradesman's ware or his word?
Is it peace or war? Civil war as I think, and that of a kind
The viler as underhand, not openly bearing the sword.

Sooner or later I too may passively take the print
Of the golden age—why not? I have neither hope nor trust;
May make my heart as a millstone, set my face as a flint,
Cheat and be cheated and die; who knows? We are ashes and dust.

The feelings that have here found a voice can not be dismissed with the assertion that they are unjust and spring from a disordered state of mind, because in any case they are widely prevalent, and must be dealt with as facts neither to be lightly passed by, nor to be talked down. We may then consider that the lines just quoted give voice to the fundamental cause of our unrest, and have a significance which we shall hardly be wise if we fail to perceive.

We shall find something of this same thing in "Aylmer's Field," but for an understanding of the fact a reading of the entire poem is demanded; it can hardly be shown by quotations. Perhaps the poem by which Tennyson is best known, that which has won the widest and most enduring fame, is "Locksley Hall." It was written before "Maud" and has some things in common with that work, among them the burning sense of wrong which we have just noticed. In studying Tennyson it must be remembered that he is now an old man, and that he has been a spectator and student of the marvellous changes of the last half century or more. "Locksley Hall" was written that long ago, written when the recent invention of the locomotive and the steamboat combined with the thrill of awakened liberty to inspire men with high hopes for the future of the world. So it is that, mingled with his bitter moanings over the present, are grand prophetic glimpses of the glorious things that are to come in its place. He says first;

Cursed be the social wants that sin against the strength of youth,
Cursed be the social lies that warp us from the living truth.

Cursed be the sickly forms that err from honest nature's rule,
Cursed be the gold that gilds the straightened forehead of the fool.

And again:

Slowly comes a hungry people, as a lion, creeping nigher,
Glares at one that nods and winks behind a slowly dying fire.

Yet I doubt not thro' the ages one increasing purpose runs,
And the thoughts of men are widened with the process of the suns.

What is that to him who reaps not harvest of his youthful joys?
Tho' the great heart of existence beat forever like a boy's.

And again;

What is that which I should turn to, lighting upon days like these?
Every gate is barred with gold, and opens but to golden keys.

But the jingling of the guinea helps the hurt that honor feels,
And the nations do but murmur, snarling at each other's heels.

But as the foil for all this we read these brighter lines, strong in the glowing beauty of a higher promise, rich in the imagination of a grander prophecy;

Men, my brothers, men, the workers, ever reaping something new;
That which they have done but earnest of the things that they shall do;

For I dipt into the future far as human eye could see;
Saw the vision of the world and all the wonder that would be;

Saw the heavens fill with commerce, argosies of magic sails,
Pilots of the purple twilight dropping down with costly bales;

Heard the heavens fill with shouting, and there reigned a ghastly dew
From the nations' airy navies, grappling in the central blue;

Far along the world-wide whisper of the south wide rushing warm,
With the standards of the peoples plunging thro' the battle-storm;

Till the war-drum throbbed no longer, and the battle-flags were furled
In the parliament of man, the federation of the world.

There the common sense of most shall hold a fretful realm in awe;
And the kindly earth shall slumber, lapt in universal law.

With this larger outlook, dreaming this greater dream, he says in the ringing accents of the enthusiast;

Not in vain the distant beacons; forward, forward let us range;
Let the great world spin forever down the ringing grooves of change.

For to him change means advancement. The possibilities of the future, though dim, loom up giant-like, and all for good, for progress.

But this was in the dawning of the century. For that time it was the most perfect truth, but we have seen how all this has been altered.

Some years ago Tennyson published a second "Locksley Hall" entitled "Locksley Hall Sixty Years After." In this he takes up the old subject from the new point of view to which he has been brought by the experiences and the observations of the long intervening time; in brief, the point of view of to-day.

Gone the cry of "Forward, Forward," lost within a growing gloom,
Lost or only heard in silence from the silence of a tomb.

Half the marvels of my morning, triumphs over time and space,
Staled by frequence, sunk by usage into commonest commonplace.

Science has failed of her promise, he tells us. Democracy from being the hope of the world has become a menace, or, at least, is powerless for good.

France had shown a light to all men, preached a gospel all men's good;
Celtic Demos rose a demon; shrieked and slaked the light in blood.

* * * * *

Envy wears the mask of love, and laughing sober fact to scorn,
Cries to weakest as to strongest, "Ye are equals, equal born."

* * * * *

Chaos, Cosmos, Cosmos, Chaos, once again the sickening game;
Freedom free to slay herself, and dying while they shout her name.

This is the picture that presents itself to his mind in this latter day; but in the decay of youthful hopes and ideals there is one thing to which he may yet cling. In the life of his early rival who

Strove for sixty widowed years to help his homelier brother man,
Served the poor and built the cottage, raised the school and drained the fen,

He finds the force that is to uplift the world. It is the leavening power of noble natures, influencing society by

their every-day acts, by their lives made a part of the common life, that is to effect whatever good the coming years shall show.

Another poem of our poet's, "The Palace of Art," having perhaps but slight connection with this line of thought, is yet well deserving of consideration. More and more are we learning the interdependence of men upon their fellows, and it is this which the "Palace of Art" is meant to teach.

I built my soul a lordly pleasure house,
Wherein for aye to dwell.
I said: "O! soul, make merry and carouse,
Dear soul, for all is well."

Everything that can gratify the senses is here, music, painting, sculpture, all things, human companionship. Here in solitude the soul revels in the bounties of art prepared for it and revolves in mind the problems that pass before her where she

Sits as God, holding no form of creed,
But contemplating all.

Full oft the riddle of the painful earth
Flashed thro' her as she sat alone;
Yet not the less she held her solemn mirth,
And intellectual throne.

But at last her loneliness conquers her, and she cries,

I am on fire within,
There comes no murmur of reply,
What is it that will take away my sin,
And save me lest I die?

The reading of some portions of Tennyson might incline one to think of him as dwelling also in "Palace of Art," but when we have studied what he has written in its entirety, we find that he is alive to all the questions that agitate the modern mind, and that he is responsive to all the chords that are struck in the great world which he looks out upon.

There are two great problems that confront man in all times and places, the problem of life here and its possibilities of happiness, and the same problem varied by its relation to the hereafter. It has been seen that Tennyson is in touch with his age on social questions; it now remains to discover whether the same is true in regard to religious opinions and beliefs. The first inquiry must, of course, be directed toward discovering the theological feeling, thought, and tendencies of our time.

While our age is a questioning one we may affirm with equal certainty that there is less of mocking skepticism among us than there has been hitherto.

The poet is first and foremost an interpreter, but he is also a seer. As there are sounds that can be heard only by an ear that is very finely organized, so the higher notes of life, notes that are to others all unheard in the discords that clash upon the harmony, come like far æolian music to the poet's ear alone. He is a seer because, catching parts of the harmony that we miss, he can feel and know, as we cannot, the changes which it presages. We shall then expect to find in Tennyson the echoes of these things which, as we have seen, are troubling present thought, nor shall we be disappointed.

In his poem "The Two Voices," he takes up the old question of Hamlet's "Soliloquy"—to be or not to be. The first voice urges upon him the fruitlessness of life, its misery and littleness.

A still small voice spake unto me;
"Thou art so full of misery,
Were it not better not to be?"

At last in giving answer to the repeated plaints of this bitter voice, he shows the hopes that then were and had been his.

I sang the joyful pæan clear,
And sitting, burnished without fear
The brand, the buckler, and the spear.

Waiting to strive a happy strife,
To war with falsehood to the knife,
And not to lose the good of life.

Some hidden principle to move,
To put together, part and prove,
And mete the bounds of hate and love;

As far as might be to carve out
Free space for every human doubt
That the whole mind might orb about;

To search thro' all I felt or saw,
The springs of life, the depths of awe,
And reach the law within the law.

Here he strikes full and clear the strong note of modern feeling. We can hardly conceive a broader outlook than is his who would, "Carve out free space for every human doubt." This man is no mere babbler of tinkling verses, but a strong-souled giant who feels in his own heart and mind the pulse beat of the world, one whose

Spirit leaps within him to be gone
Before him then,
Underneath the light he looks at, in among
The throngs of men.

It is to "In Memoriam," that we come for the deeper convictions, hopes and fears, to which he has given utterance. Throughout the poem is one long questioning. It is an anxious, earnest soul's yearning for some glimpse of the truths that must ever be denied us, save as we grasp them with the spirit's insight. The character of the poem finds specific expression in the following extract from it:

You say, but with no touch of scorn,
Sweet-hearted, you, whose light-blue eyes
Are tender over drowning flies,
You tell me doubt is Devil-born.

I know not; one indeed I knew,
In many a subtle question versed,
Who struck a jarring lyre at first,
But ever strove to make it true.

Perplext in faith but pure in deeds,
At last he beat his music out.
There lives more faith in honest doubt,
Believe me, than in half the creeds.

He is too great, he has too catholic a spirit, too broad a justice to misunderstand the religious instincts, the intellectual fiber of him who doubts; and his own religious nature is so deep and strong that he equally understands how great is the soul's need of religious feeling. To him each stir of doubt is as a hand outstretched towards the highest, an uncertain groping for something tangible and sure amid the uncertainties that hedge us in on all sides. Because of this attitude, which is so just an interpretation of the best thought of the time, he welcomes doubt, nor can he think it devil-born. But he also apprehends how thoroughly incapable is a purely intellectual philosophy of satisfying the soul's needs. It is something finer, holier, more purifying than this that must come to us ere we shall be content and at peace.

Hold thou the good, define it well
For fear divine philosophy
Should push beyond her mark and be
Procuress to the lords of hell.

Tennyson tells us in his second *Locksley Hall* that

Since our dying race began
Ever, ever, and forever was the leading light of man.

* * * * *

Indian warriors dream of ampler hunting-grounds beyond the night.
Even the black Australian, dying, hopes he shall return a white.

And to him the thought of God, mingled with the thought of eternity, is that it must come to us as a dominating, an ennobling influence.

Self-reverence, self-knowledge, self-control;
These three alone lead life to sovereign power,

as he tells us; but what he calls "The sacred passion of the second life" is greater and more potent than these.

We have already noticed that he is no longer as hopeful of the coming days as he was at an earlier time, that he has caught the tone of anxiety that marks the present; but are we to conclude from this that he is a pessimist? As far as those earlier dreams are concerned it may, well it must be so, but the "Golden Age" is only put farther away in the future; it is not abandoned as the ideal to which hope points. He has come to learn that social conditions are changed only as men are changed; that legislation is a result, not the cause of altered social relations, bettered or otherwise; and that democracy is a menace, save as the operation of good influences in communities shall make it pure. Yet, if

these influences are slow, they may be none the less potent. He says, only

"Let us hush this cry of 'Forward' till ten thousand years are gone."

In like manner, if he doubts, his is not the doubt of despair; at the last all must be well, though now he would gladly see more clearly.

Oh! yet we somehow trust that good
Will be the final goal of ill,
To pangs of nature, sins of will,
Defects of doubt and taints of blood.

That nothing walks with aimless feet,
That not one life shall be destroyed,
Or cast as rubbish to the void,
When God hath made the pile complete.

There are those who fly from their doubts to some positive belief. To it they yield themselves, not because they have sufficient intellectual assurance of its truth, but because they need it to cling to; because they must have something to strengthen themselves against the questioning fears which they are perhaps able neither to face with courage, nor to grasp and fathom as problems for the understanding. These are little souls, and Tennyson is not among them. He does not fly from his doubts, but meets them manfully. He does not banish them lest they disturb his repose; he rises above them, calm in his strength of soul. They are with him still; they perplex him but they cannot trouble him.

In *The Two Voices*, when he has debated long with the one that would have him break away from life, he hears at last another voice.

"What is it thou knowest, sweet voice," I cried.
"A hidden hope," the voice replied;

So heavenly toned that in that hour
From out my sullen heart a power
Broke like the rainbow from the shower.

To feel, although no tongue can prove,
That every cloud that spreads above
And veils the love itself is love.

He has other grounds of faith than the book. Were this taken away he would still look up to

That God who ever lives and loves;
One God one law, one element,
And one far-off divine event
To which the whole creation moves.

God is not to him altogether the God of the schools and the theologians. He is not one who can save only through the shedding of blood, the performance of rites. He is a greater figure and a grander; he is

Infinite Ideality,
Immeasurable Reality,
Infinite Personality.

This he has learned from an inner consciousness; it is not a thing that he has proved, neither can it be proved. His whole theological thought is rather a development from within and from the teachings of Nature, than a thing that he has accepted for himself as the words of inspired men. Sitting on the "Great world's altar stairs," he feels that they "Slope through darkness up to God." In that darkness he can only

Stretch lame hands of faith and grope,
And gather dust and chaff and call
To what he feels is lord of all
And faintly trust the larger hope.

And yet, for all this, he has the consciousness that these are the world's altar stairs, and that they lead to God. This is sufficient for him; knowing whither he is going, it shall not disturb him if the way, its whys and wherefores, present to his understanding many things beyond its power to fathom.

In all this Tennyson's theology is in accord with modern thought. It owes no allegiance to dogma; it is earnest, thoughtful, liberal. Its questioning springs from the needs of a developed civilization, which demands that its religious belief shall harmonize with its intellectual convictions. Its yearning is that which has come to man in all ages and will be his forever. Its hope is the heritage of the race, and nowhere has it found a sweeter, a nobler, or a higher expression than in that grandest of Tennyson's shorter pieces, *Crossing the Bar*.

BY HELEN O'SULLIVAN DIXON

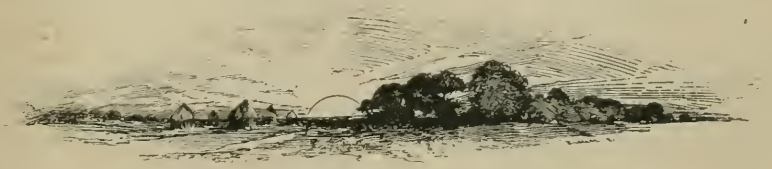
I tread amid the tangled grass ;
Against my cheek
The breath of honeysuckle sweet.
The very clover at my feet
A wealth of honey dew distils.
And when a softest wind
From out the west
Comes whispering—Ah me !
This odor fresh
My heart with rapture fills.
Methinks an odor strange,
A something of another world
Than this—
A flower-crowned world,
Unknown to pain,
Whose May tide season
Being only once,
Must never come again.

The wheat, so tall, so tall,
Upon its head a golden tinge,
And greenest rye,
In graceful strength
Uprears its tossing crest
Above it all.

Along the rough and worn old fence
So gray,
That e'en the lichen from it
Falls away,
Small, whitest blossoms,
Cling and bloom,
Soon to berries red and black
In wild profusion come.

A palest butterfly skims past ;
Against each flower
It softly leans,
But not for long,
It flies so fast
To other loves,
(The fickle thing !)

At last,
I pause amongst it all,
A something's missed,
A something very sweet to me,
It is the trembling poppy,
Scarlet kissed,
And winsome eyed
Enough to see,
It holds within
(But once we gaze)
Its subtle self
For every thought ;
While from its silken,
Restless heart
Across our souls outsteal
An essence weird and wild,
A very elf
To mock our every sense,
It tending us by its power,
Indeed a fatal power.
Enchantment is its dower,
This black-eyed, rosy flower,
Enchantment is its dower.



ERICA

BY PAUL VERNET

THEY were sitting upon the veranda, watching the play of the moonlight over the rippling sea that stretched out before them, Lionel Wintour with a glowing cigar between his lips, Mrs. Wintour swinging in her hammock, idly passing her fingers at intervals over the strings of her guitar in a succession of plaintive, melancholy chords.

"Erica," said Lionel Wintour, breaking their long silence, "we have been married just two years to-night."

"Yes?" said Mrs. Wintour, with a listless interrogative inflection, "I had forgotten."

It is usually the man who ignores or loses count of the anniversaries.

"Two years to-night," repeated Wintour, casting the stump of his cigar out among the sands in front of the house, and tilting his chair a little more to the end that he might look into his wife's face better. "Two years to-night, and in many respects the two happiest years of my life. There has been but one thought—" and he hesitated, sighed unconsciously, and turned a grave face toward the sea.

"Well?" questioned Mrs. Wintour, with the same listless air as before.

"And that is," continued her husband, as with an effort he turned his eyes full upon his wife again, "that I do not seem at all necessary to you. Your life would have drifted on quite as well, better perhaps, if I had been satisfied to be your friend, your patient, willing slave, who, while he kept himself in the shadows of the background, would yet be ready to serve you when you needed a strong champion. I do not know you as well to-day as I did then. I cannot touch your innermost being, and you, too, you are unsatisfied, unhappy, and chilled. I cannot blame you, but in the days preceding our marriage, I used to think in my blind egotism, in my intense hope, that with tender unobtrusiveness, I could win you away from your sorrowful past."

Wintour ceased, drew out the silken handkerchief from his breast pocket, and wiped his forehead slowly; perhaps he passed the fabric across his eyes, I do not know; then he went on in a tone whose vibrating melancholy would have moved to pity any woman in the world but Erica. "I live in the hope that some day I shall reach you and touch you again as I did that winter in Genoa, when your need of sympathy was so great, and my need of you seemed more than I could bear."

"Genoa?" exclaimed Erica, with kindling eyes. "How I love even the sound of the name! Genoa! the city built from the life breath of poets, the life breath crystallized into perfect form. And its cemetery, the Campo Santo, it has been one of my prayers that I might be buried there, where death seems freed from all its horror."

"Ah! You do remember. How long ago was that?" asked Lionel, regarding his wife's dreamy eyes curiously.

"O, what makes you ask me such stupid questions?" cried Erica, petulantly, bringing a series of harsh discords from her guitar. "You are always asking me when and where this, that and the other happened, and you know I cannot remember. All that I do know is that it did happen. Genoa! Its sculptures live in my brain; the soft, delicious days warm my freezing body even now. I met you there—pst! is not that enough?"

"Poor, poor little woman!" was Wintour's sole reply, as his wife continued:

"I suppose it is because there have been so many blanks in my past that

I do not remember accurately. Ah! how I used to suffer! How pain and sorrow dazed my poor brain! How I longed for a mother's touch! But my mother was far away—far. Lionel," she whispered, leaving the hammock and nestling down in her husband's lap with the air of a tired child, "Lionel, you talk about love as if I never had any conception of the feeling. I tell you if you had known the years of a love like mine and—and his, you would never wish to hear the word again, you would never be clasping a woman to your pitying breast as you are clasping me now. Less agony and intensity than mine has sent many a soul to a madhouse."

"Hush! Erica, we must not talk like this. It excites you too much, and I, myself, cannot endure it. I should not have reproached you, but I saw you sad and distrait, and I felt impelled to tell you once more, as I have told you already a thousand times that I long for you to lean on me and open your heart to me, just as you would to your own mother. If I cannot be more to you, I, at least, want to be the dearest and nearest friend you have on earth."

"You are that. No man could do more than you have, and I thank God for having sent you into my life. The saddest part of it all is that I have so little to give, while I am constantly taking from you until the debt is too large to ever be repaid. You are my best and dearest friend," and she laid her cheek against his in a way that sent the man's blood in him coursing through his veins until he almost forgot that she gave so little in return for all his overwhelming love. "You are my dearest friend, and perhaps one day you will be more. But what fire can be brought out of dead ashes? I died centuries ago. O, Lionel! there is but one thing that could fan the ashes into life, and I pray God it may be your hand that will find that lost link of my dreary life. I know you have tried. O, Lionel, Lionel, leave no stone unturned."

Wintour could bear no more. He carried her to the hammock, then leaving her, strode away down to the sands. When his stalwart figure had grown dim in the distance, Erica went into the house, lit the lamps, tried to read a book, then tried the piano, then the guitar, and finding nore of these in accord with her mood, she wrapped a mantle about her head and shoulders and walked down the beach to meet her husband. Her thin slippers became wet and uncomfortable before she had gone two hundred yards, so she turned back again saying to herself: "I'll go back and make the house bright and warm, and I will try to be more cheerful. I am little less than a fiend to burden him with my sorrows. He is so good. Dear, noble Lionel! What an irony of Fate it is that he and I must travel in parallel lines forever; that neither of us can fathom the loneliness of the other."

CHAPTER II

THE GATES AJAR

Mrs. Wintour arranged an opera party for a certain evening in February knowing that Nihlson was to be the prima donna. The Opera House had only been opened for a few weeks, and as it was said to be quite unique in the matter of interior decorations and arrangements, Erica and her friends were in a flutter of delighted anticipation.

They were a little late and the curtain had risen on the first scene when they entered. Mrs. Wintour came in on the arm of Governor Hampstead and her husband led in Mrs. Hampstead. They were followed by Mrs. Sangteller, a charming woman—widow, scarce turned fifty, and Senator Foraker, both guests at the Wintour's home.

The opera was Faust, and its weird music, as it always does, held the audience spellbound until the curtain dropped. The fall of the curtain on the first act saw a sudden change in Mrs. Wintour. Her husband, sitting

near her, noticed that she shivered, and at once laid her warm fur cloak about her bare, white shoulders. She had relapsed into a trance-like silence, her eyes fixed upon the drop, her brow troubled as if some inner consciousness struggled for expression, and her face as white as a block of marble. All this was only perceptible to Mr. Wintour, who was a barometer in the matter of his wife's feelings, and to Mrs. Sangteller, who was studying Erica's strange moods with the deepest interest. The rest of the party, chattering together in undertones in the back of the box observed nothing at all unusual. Even had they sat beside her, they might have seen no change. So few people comprehend the fine shades of moody intensity.

The Opera House was Moorish in style, being a network of fretted and richly colored arches, lit by fantastic colored lamps, some half concealed behind the open-work carvings, some swung by massive chains from the ceilings of the many private boxes—everywhere the color, the carving, the curves and the textile fabrics stiff with gold and silver that belong to the tales of the Arabian Nights for magnificence, and to the Moors for beauty of form and individuality of style. The curtain represented the unloading of an ox team at the gates of Seville. Erica felt a thrill of recollection as she gazed steadfastly upon the creamy bricks of the arched wall, the creamy dust of the broad highway, the short square, sturdy bodies of the oxen, the clumsy-wheeled ox cart, the barefooted driver with his long, sharp goad, and the water carrier with his two buckets of water and lemonade, and little stand of glasses on either end of a long pole swung across his shoulders.

These people belonged to her. The curtain melted out of sight, and out of the mists of her pain-paralyzed memory came a faint picture of a winding road of this same creamy dust, tinged with burnt sienna on the outer edges; a long, low line of willows on one side of the way; a trimly cut orange hedge on the other.

Back from the road was a small two-story house, with a fantastic roof of dull red tiles. The dwelling itself was built of rough-hewn creamy stone, which time had softened down to a gamut of rich browns, grays and greens in the corners and cracks, with the combined aid of lichens and dirt. Deep-set balconies, such as the Spanish women love, were sunk in here and there, over entrances and wide windows, and a broad arched veranda went round two sides of the building.

How clearly all the details came back to Erica! Against the creamy walls of the entrance, a rosebush laden with blood-red blooms laid its glowing cheek against the stone, and beneath this very archway a woman stood in an expectant attitude. Tall, commanding, beautiful, though she had nearly reached the close of a long life, she folded and unfolded her hands nervously, and continually turned her great black eyes toward the west, to gaze down the road whence those whom she awaited must come. She was expecting Erica, her new daughter-in-law—Erica and her son. She was a Basque and not a Spaniard (the Basques are always careful to make that distinction). She had strong loves and strong hates. Like all Basques, she was severe and self-contained, and modeled her life after the Spartan pattern. She loved the plain truth, the penances and the rigorous fasts imposed by her religion; patriotism swept her soul in surging billows, and her greatest ambition lay in having sons and grandsons to perpetuate the honor of the family name. There were no women among her own people to suit her exacting ideas regarding the transmission of desirable traits, and so she had centered her whole hope upon this young American of good stock and great brain power.

Erica never remembered but one phrase of the welcome she had

received. Her mother-in-law had remarked :

"Cold like me. That is good, excellent ! Yet volcanoes beneath—good again, for a furnace at the heart is the only motive power by which one reaches greatness. Thou art one of us." And tired, strange Erica went into her own apartments, inwardly thanking God that her new mother-in-law was not an emotional person, like some of the Spanish women she had known.

* * * *

The assembly burst into round after round of tumultuous applause, and shouted madly for the incomparable Nillson to come before the curtain. Erica heard them not. At last her husband bent forward and said to her with a voice full of tender concern :

"Erica, dear, you are not well. Can I not do anything for you?"

Erica shook her head slowly, and drew her chair apart from her husband's. A shadow of annoyance passed across her spirit, for she had tried to remember the Past so often, and she could not ; and now the gates were slowly swinging apart and revealing the long-buried secrets. If the awakening was ever to come, it must be now. Even if it brought with it anguish and suffering, she felt that she must regain the lost control of her mind. In a moment she relived another scene.

* * * *

All night she had lain among the heaped-up pillows of her bed, her eyes distended and aching with the pressure of rushing thoughts, and unable to lie down lest her breath cease entirely ; even in sitting up, a curious catching pain wrenched her heart. She drew breath with the greatest difficulty, and the weight of centuries seemed to crush both brain and chest. Outside, the rain beat down in torrents, driven by the veering winds in sharp gusts against the rattling panes from time to time. The rose branches, too, swept from side to side with an eerie scratching noise.

Erica counted the little streams that fell spasmodically from the eaves, but that soon became confusing. One light, a hanging lamp with a pale green globe, cast a grim radiance through the room. Presently, it must have been near morning, her husband issued from the shadows of his own apartment, and approached her bedside. Tall and slender, with the proud carriage of an Emperor, nervous in build, with cruel, gray eyes, high cheekbones, square jaw, short black hair and a large nose, he was not pleasant to look upon when convulsed by the undisciplined feelings to which he was a prey. A Spartan in time of danger, a polished companion in society, the best student in the college in his school days, a lover such as few women ever had—a lover in intense adoration and overwhelming mastery ; a fiend, now that jealousy gnawed at his vitals.

Erica had stretched herself out at full length in her bed, folded her hands upon her breast, and for a moment had stopped breathing and speculated as to how long it would take to stop the machine permanently. Upon her husband's approach, she had simply opened her eyes, and maintaining the same attitude, said in a bantering way :

"You would love me far better dead—just see how white and cold and peaceful I look."

"Yes," he answered, slowly looking down upon her, "I should love you better dead ; I hate you so now. If my church did not call it a sin, I would kill you myself. You are not one of us. You cannot comprehend a love like mine. To you I am a tyrant ; to one of my own race, I would be what I am—a lover. Erica, Erica, I have given up everything in life for your sake—friends, ambition, business, relatives, all, all, and to what end. No sacrifice you can make is enough. The chair you sit on, I could crush to atoms ; the guitar that you play takes away your thoughts from me, therefore I hate it ; I hate

my mother, for you talk to her, and she holds your hand; I hate our son, and I have sent him far away, whence he will never return, lest I see him kiss you. I have given up everything, and for what? For hell, torment."

His eyes blazed dangerously, but Erica knew that in the worst event her hand could restrain him. He was taking a small vial from the breast pocket of his loose dressing robe—a curiously wrought vial of Venetian glass. Oh, but these wizards of the hot-blooded races know how to cloak their death-dealing potions in festal robes! Erica pretended to ignore the movement, and, placing her hand upon his arm, she forced him down upon his knees beside her.

"Pray with me and for me," she pleaded, "just a moment," and under the ghastly light of one lamp, they both entered into silent prayer. Then Erica said: "Euskaro mio, I have come out of a far country, and I have left my people because I love you; I have given up the men friends that in my country are permitted, because I love you; I have put women and girls out of my life whom I might help and comfort, and I have done this because I love you; I have shut myself within the four walls of my chamber, into which even your mother does not come, because I love you. I have nothing more to give but life itself. All the rest—soul, spirit, heart, senses, son, kin and friends, I gave long ago—then take my life."

The Venetian vial touched her hand. Oh! the slavery she had endured all these years, and here was an opportunity. Should she take it?

"Let us die together," the Basque whispered, stricken almost dumb with intense feeling. "Let us die together! This life will never satisfy me. Unless your body were incorporated with mine, I never could feel absolutely secure. Oh, angel among women! God will care for us as those of this world never can. Five drops and they will find us here to-morrow, locked in an eternal embrace. Will you try it?"

The little glass stopper was sweet; life was too bitter; the hungry heart was throbbing itself to death in prison, and the very word death carried with it a sense of rest, peace and eternal love.

One drop on the stopper! The Basque watched her with the eyes of a madman.

Two drops! He was trembling violently, but a seraphic smile was on Erica's face. Visions floated before her eyes; her labored breathing became tranquil; her husband grew into a god-like image, and she fell unresistingly into his waiting arms.

Three drops! A crash roused her just a little. Two wild eyes burned into her ecstatic semi-consciousness, and troubled her. There were cries and shrieks and a sound of many feet, and her husband cursed and swore and cried out:

"Bring a doctor! fools! hounds! devils! Can you not see that she is dying—my angel, my life, my body, my spirit, next to my God!"

She knew no more for many days, and then she only knew that she lived.

* * * * * *

"Erica," said Wintour, leaning forward, and touching his wife on the shoulder, "you are not well. Let us go home."

"No," she said wearily, "I am not well. We will go home if you do not mind the trouble. I feel so very, very strange."

"Yes, dear, I understand," he replied, as he wrapped her in her cloak, and excused her to her guests. With a faint smile on her face—women must smile as you know, even when the thumb-screw wrenches the hardest—with a smile she left her friends. Once in the carriage Wintour said to her, as his arms crept around the weary body:

"Little woman, by some strange power, I have walked side by side

with your mind over the old ground to-night. Poor little woman! my little Erica! my weary, storm-beaten child! I want to be more your friend than ever before."

CHAPTER III.

A HEART HISTORY.

Just one word regarding this Mrs. Sangteller. Two months before the opera party was given, a letter had come to Erica from a friend who was visiting in a far-off city. It read:

"My dear Erica:

By this same mail I send a letter to a Mrs. Sangteller, who has recently gone to your city. She is a thoroughly charming woman, with a warm personality. You and she were destined to become friends, for her intensity needs concentrating, and yours needs diffusing. She will reach your inmost soul as no woman has whom you have ever met before. Work together, and some day I shall be proud to say that I led you together for the good of the great world.

Your friend as always,

JOHN TERRY LANGDON."

So Mrs. Sangteller had presented her card at the Wintours'; and when Mrs. Wintour and she had greeted each other, their spirits had rushed together in a mighty fullness. Day after day Erica listened in wrapt admiration to the continuous torrent of reminiscences, philosophic thought and ready wit with which Mrs. Sangteller's conversation sparkled. One afternoon when they had known each other for many weeks, Mrs. Sangteller looked down into Erica's eyes and said suddenly:

"My dear, so far I have done all the talking, and it has been, for the most part, about myself. Now tell me a little about your own life. What has caused the deep current of melancholy that tinges your whole existence? I do not ask out of any idle curiosity, God forbid, but simply because I feel certain that I can help you if I once know the cause of the sorrow. Tell me, dear, have you had a dark heart history?"

Erica looked at her with an expression of utmost simplicity and replied:

"Beloved friend, what woman has not?"

"There! that is enough—that is all I wanted to know for the present," replied Mrs. Sangteller, gazing at Erica with an absorbed and troubled air.

"What puzzles you so?" asked Erica, uneasily. "Why do you look at me so curiously? Have I said anything strange? Sometimes when I think of the way in which my mind has been paralyzed by years of tragedy and suffering, I feel as though I ought not to be among sane people at all. My only excuse is that my past is a blank, that my memory is blunted, and that I am only alive to the present."

Mrs. Sangteller bent forward and kissed her. No kiss had ever thrilled her with such a sense of perfect trust, and then said to her:

"Dear child, I shall never press you for your confidence. I knew that you had had a heart history, for you are the most mature woman for your years that I ever knew, and your kind of maturity is never seen except in the wake of intense suffering. You do not seem to belong to this age or this country; you are brimming over with foreign expressions, not the affectations of the modern novel reader, but with expressions that show that you have lived in a foreign land. Were I a believer in re-incarnation, I should say that in a previous state of existence you were a Spanish lady of high degree. In fact you always impress me as one who has just stepped out of an old, old canvas."

"Have I a moth-eaten appearance?" asked Erica, with a smile.

"O no, no, no! but you are quaint and silent, and your eyes have a hungry look in them that wrings my heart."

"I am sorry that my features should convey such an impression," said Erica. "I ought to be a most contented woman with a husband like Lionel, who is not only my husband, but my friend as well."

"He is a good man," said Mrs. Sangteller, "and one to whom you can anchor your faith, Erica. And, dearest, never let anyone come between you two."

"Between Lionel and me? What an idea! As if anyone could!" exclaimed Erica scornfully, while Mrs. Sangteller thought:

"Weak in her safety; a child yet in some ways."

CHAPTER IV.

THE PRINCE.

The Wintours were again at their summer home at the shore-Wintour Manor. One of Lionel's ancestors was known to have come over with Lord Baltimore in 1633, and the present Wintour had a strong leaning toward everything English, so Wintour Manor was as nearly like its English prototype as money and limited time could make it.

They had only been a few weeks at the shore when Wintour was called away on urgent business. Before his departure he only had time to telegraph Mrs. Sangteller an invitation to come down and stay with his wife, and then to take the train to town and drive to John Langdon's office.

"John," he said cordially, "I am called away on very disagreeable business. I may be detained several weeks, so if you can make plans to suit, I wish you would go down and stay at the Manor at night. Erica is timid, but you understand her so well that I shall feel quite at ease if I know that you are looking out for her comfort. You'll go?"

"Indeed I will, Wintour."

So Lionel went on his way with a comparatively light heart; and Langdon, a healthy, wholesome-minded man as one would wish to know, went down to the shore every night, and did his duty in protecting and amusing the two women.

Langdon was a lettered man. He ought never to have been tied down to the cares of a humdrum business; but as destiny had made him a manufacturer, he was obliged to submit and only indulge in communion with the muses when the cares of the day were laid aside. So it happened that he took more than ordinary delight in trying to stimulate Erica's taste for good reading, and really did much toward bringing her mind out of the terrible apathy into which it had drifted.

Erica's previous marriage, of which few people were cognizant, had been a peculiar one. The intensity of that period of life, with a man who adored brains, but who bitterly resented the influence of the printed page, inasmuch as it diverted his wife's attention from himself, ten years of that sort of thing had deadened her mind to such an extent, that it was almost impossible to rouse it again into action.

The third of July had arrived, but Lionel was still away; so Langdon put a book of recent verse into one of his pockets, and a small volume of manuscript verses written by himself into another pocket, then with a peculiar, abstracted look, sauntered down to the train that would convey him to the Manor.

Once settled in his seat in the car, he curled down in the corner, drew his hat down over his eyes, and prepared to rest thoroughly. Most of the men were trying to read the headlines of the evening papers, but the train was going so swiftly, and the lights were so poor, that they soon gave up reading and stared vacantly into space until they came to their respective stations. Suddenly Langdon smiled, pulled an old envelope and a pencil from his pocket, and after using his fingers as automatic counters for a few moments, he scribbled something, and replacing the paper in his pocket, relapsed into silence. He had written a triolet.

The next morning was so delightful that Mrs. Sangteller accepted an invitation to drive, leaving Langdon to look after Mrs. Wintour. Erica

was one of the women who, having outlived their dangerous passions, or who, having never been aroused, at the same time fan into flame the emotions of the men with whom they are much thrown in contact. As a rule they do not attract men at first. Women like Erica are the ones who drive men to the tragedies of life. Erica was so pathetic, and Langdon so perfectly staunch and spiritual that Mrs. Sangteller, with all her worldly wisdom saw not the least impropriety in leaving these two to spend the day as they wished, be it on the beach, on the drive, or in wandering through their own grounds.

There had been a slight rain the day before which had freshened the air and drawn the sweetest odors from earth and shrubbery alike. After seeing Mrs. Sangteller off, Langdon and Erica made a detour of the grounds. At last they reached a point where sea and land lay stretched out before them in a beautiful panorama. Throwing themselves upon the sward beneath the trees, they were both silent for many moments. While their eyes gazed out abstractedly across the sea, their minds were flowing in very dissimilar channels. Erica was vaguely contrasting her past with her present condition. Like a child who has stumbled and fallen, and gets up bruised and lame, without realizing what has disabled him, Erica felt bruised and stunned, but except at rare intervals, her brain carried no specific impressions of the many tragic scenes which she had lived through. There might have been men whose strong personality would have wakened the dormant memory to life by the temporary arousal of her emotional nature: but fortunately or otherwise, Wintour was not one of these and she drifted along by his side and if life offered her no acute enjoyments, it at least spared her any acute suffering.

Langdon's brain, on the contrary, was in a tumult. He had lived to the age of forty-three and never before had found himself in such an unsettled state. Sometimes he had been lonely, it is true, but a canter on his horse, or a visit to an excellent theatre would dissipate any blue feeling he had ever had. His pride in Erica as Wintour's wife, was unbounded. He was on sufficiently confidential terms with the two, to know something of Erica's past, and his constant study had been, to devise a means to arouse her from the state of chronic melancholy into which she had grown.

To-day his failure seemed more than ever apparent. The hungry look in her eyes seemed to cry out to him. For the first time in all their long friendship, the truth flashed over his spirit. It blinded him. It drove the blood in surging billows through his heart until it seemed as if death clinched at his very being. But his honor was strong.

He took his triolet from his pocket, and read it aloud to her. He had a soft, tender voice and the dewy, wistful eyes that belong to the spiritual nature. The triolet was so simple and its sentiment so very harmless that he never questioned the propriety of reading it.

"HER HAND

The touch of her dear hand
So sweet and tender!
Ah! how can I withstand
The touch of her dear hand,
Nor can I understand
What charm doth render
The touch of her dear hand
So sweet and tender!"

The voice ceased. The man waited in silent suspense, until Erica said in her cool, critical way: —

"Excellent for a triolet: but I dislike French forms. Who wrote it?"

"I did," replied Langdon, folding it up to replace it.

"Let me look at it again please," said Erica, extending her thin white hand to take it.

Her fingers only brushed across his, but the touch made Langdon quiver from head to foot, and throw himself back upon the grass to recover himself in a silent struggle.

Erica regarded him curiously as if he might be a new species of insect. Presently she found that she could not remove her eyes from him. Memory's gates swung slowly apart: she remembered feeling something like this once before: then the touch of her hand had sufficed to still the tempest. She would try it again: it was a pity to see a man, and that one her best friend, suffer so. Poor, unconventional, untutored Erica! She touched his brow in the lightest possible manner, and said solicitously:

"You are ill. Your face is as white as the moon. Your lips and eyes are strangely drawn. Can I do nothing to help you?"

A dismal groan was the only reply. Then Erica continued: —

"I have had just such feelings. It is your heart, is it not? It feels as if it were being crushed in a mill. Sometimes even now, there are many nights that I cannot sleep, for the pain and the oppression."

Langdon could endure her touch no longer. Rising to a sitting posture and gazing at her with famished eyes, he said in choking tones: —

"Erica, I had hoped that I should never lose my self-control as I have to-day. To-morrow I shall go out of your life forever. I shall write to Lionel and tell him what has occurred. This one day though I must tell you all – all – all! Erica, I am thirsting for such words of tenderness as might come from your lips: I am starving for the touch of a hand like yours: I am perishing for the love of a woman like you — one who could meet me heart to heart — sense to sense — one who could be a companion as well as a wife."

Erica rocked back and forth, her eyes closed, her hands locked tightly together. Something was stirring within her. Her King had died to her long ago: but there are times when a Prince holds the sceptre of an absent King. Was this the Prince?

"Erica," whispered Langdon, "it kills me to see you suffer, and yet the demon within me pushes me on to the end. For me the light of eternal day has dawned within the last hour. I shall leave you with nobler purposes, higher aims and tenderer sympathies than I ever had in my life before. But I shall leave you bearing with me a tomb in my heart. If you ever need me send for me. If anything should happen to Lionel send for me. For the first time in my life, Erica, I comprehend the agony that has arrested your mind's growth. Erica! my little friend — I must go — I can endure no more!"

Erica's eyes were distended wide now. Langdon leaped to his feet to leave her while there was yet time, but he had taken but one step when Erica threw herself forward and wound her arms about his ankles.

He was helpless. Over Erica's storm-tossed soul rushed the full realization that here was a man who might have been her Prince. If they both could have died there!

Langdon at last stooped awkwardly and unwinding Erica's arms, lifted her to her feet and said huskily: —

"Come, Erica, we must go back to the house, and to the life that is left us. It would be madness to stay here."

And the Prince passed out of her life leaving her a child no longer, but a woman with all a woman's strength and with all a woman's capacity for suffering.

CHAPTER V.

THE MONSIGNOR

After that day, Erica drooped rapidly. By the time they were ready to go back to town after Thanksgiving, she had become so weak that she was obliged to remain in bed all winter. It was a hard struggle for her. Years of tyranny and pain had trained her to be secretive: the light of worldly eyes had never shone in on the dark heart chambers, for pride had kept the door fast locked, yet it was not the secretiveness that sought ways of darkness, but a secretiveness

that led her to believe that the world took but small interest in her individual woes.

She and Lionel seldom spoke of Langdon. Erica knew that her husband had received an explanatory letter from Langdon, for he had drawn her down upon his knee one evening and said: —

"Dearest, if you had met Langdon before you knew me, do you think that you could have loved him? Do not be afraid to answer. John is my best friend. And as for you and me, much as I might wish it otherwise, I know that you will never love me with the blind intensity that I do you. But I am content to be your friend if it must be only that."

"O my darling, my darling! I do not know whether I really loved him or not. That scene with him waked my mind from its long sleep, and helped me to re-adjust the past. But it also brought with it a fuller realization of your beautiful unselfishness than I had ever had before. O how cruel I have been to inflict all my mental distortions upon you. Why did you ever marry me?"

"Why? Because I loved you and I knew that you needed tending. And I hoped that the time would come when you could return in part the love I had for you."

"Where is John now?" asked Erica, after a long pause.

"He is in Spain, dear. In that one letter he wrote, he said he should spend the rest of his life searching for a solution to the mystery that you and I have so long and so hopelessly tried to unravel. Poor fellow! even if he never finds a clue, it will be some satisfaction to him to feel that he is in our service, and he may win success where we failed."

One day, not long after this conversation, a card was brought into Erica's sick room, which sent a torrent of blood rushing over her body. It bore the name of

MONSIGNOR GREGORIO ARROYA
Sevilla

He had been told by the man who attended the door that Mrs. Wintour had been ill for months, and could not receive. He had, however, insisted upon being announced, and had stated that he had a message of the greatest importance to deliver to her.

"You may show him up at once, Bennett," said Mrs. Wintour. When the man had left the room, the maid hastily arranged a chair for the reverend guest, otherwise there was no preparation to make, for Erica's apartments were always dainty and fresh. Besides, what difference could externals make in the face of the revelation that waited upon the priest's lips? She had been searching for this man for years: she had heard of him from time to time but she had never dared to question him by word or by letter, lest the answer should crush her. It was this one question that had by continual recurrence to her bewildered brain, maddened her, paralyzed her powers of thought, and totally arrested her mental activity. It was this same question that now, as she lay on a bed of illness, indirectly induced by the scene with Langdon in the garden of Wintour Manor, this same question that incessantly swung round and round in her brain with the broad, perpetual sweep and whirl of a great water wheel.

She tortured Lionel with it whenever he was with her, and he was never long absent: and Lionel grew care-worn and aged in these few months, overwhelmed by his helplessness to minister to his wife's diseased mind, even in the smallest degree. And now the answer was to come.

The grave Monsignor entered, bowed and seated himself.

Erica was the first to break the silence.

"I have waited so long for you, Father!" she said breathlessly, "I cannot call you Monsignor yet: the title is too new: and when I knew you before, you were only a father. I have crept to your door, and have turned away, sickened with the fear

that you might not know where he was. I have written you tear-stained letters and have burned them. I had not the courage to send them. O Father, I hope that you have good news — I could not bear another blow!"

"Patience, patience, my child!" replied the Monsignor, "God has been very good to you. He never lets his faithful pass unrewarded. You hunger for word of your son, the child they took away from your breast so many years ago?"

"Hungered, Father? Ah, only a mother can understand."

"I have brought him back to you. And I have left in the convent where we found him a friend of your husband's, John Langdon, who will end his days in peace there. It was he who found us and told us where you were and how you yearned for your child."

"My Manuel? — here with you?"

Erica had risen up in her bed to a sitting posture. Her eyes were unnaturally bright and she was shaking from head to foot. Presently the distended eyes relaxed, the locked hands fell apart, and as the light of consciousness faded out of the pain-racked face, the Monsignor tenderly laid her back among the pillows and made the sign of the cross upon her forehead.

"Your mistress is in no danger," he said to the maid, "and if you will kindly bring up the boy I left in the carriage, I shall be obliged."

Light feet soon tripped up the stair-case. At the doorway the new comer showed a shy reluctance to enter.

"Come Manuel," said the Monsignor, "your mother is unconscious now, but in a moment when she wakes, your hand must be in hers. Manuel, it has been the waiting and the yearning for you all these years that made your poor mother so ill."

Manuel, though less than twelve years of age, was almost as mature as a man, having been brought up in a convent among men, and in all the loneliness of a parentless childhood. No woman had ever come into his life. The beautiful pictures of the Virgin and her images on the chapel altars were the only semblances to a woman that he had ever seen. In his eyes therefore, all women were as angels, and as such intense reverence was due them.

A boy who had ever known a mother's touch would have embraced a long-lost parent. When Erica uneasily turned toward the door and opened her eyes is a dazed, dull way she saw a beautiful boy kneeling before her, his white hands clasped together tightly, and his eyes lifted toward her with mute, prayerful admiration.

"Can it be?" moaned Erica, "my little boy! my little baby!"

"He speaks no English," said the Monsignor softly.

Erica started painfully, then relapsed into the loving Spanish tongue that had so long been strange to her lips.

The Monsignor withdrew, the maid withdrew — Erica and Manuel were alone.

Presently Lionel stole into the room, happier than he had been for years, yet with the secret dread that the son that Langdon had found for Erica might not love him at all. As he walked over to the bed-side where Manuel lay locked in the arms of a real, flesh and blood mother, all the loneliness of his life vanished — for Erica was happy. Lionel hesitated, but Manuel, with a look from his large liquid eyes that was almost heavenly, disengaged one hand from his mother's neck and reaching out to Lionel, drew him down and said in sweet simplicity: —

"Y tu? — tu es mi padre bien-amado, si, mas que bien-amado,— adorado!"

And then life really began for these three.

M'SIEU' LAFONTAINE OF CALIFORNIE

AN EASTER STORY

BY JULIA H. S. BUGEIA

PART I

HAT a queer little wedge of a shop, chinked in between two great sombre buildings, down on California street, with "Ici on Parle Francais" in quaint, awkward characters upon the door—a common enough notice in this cosmopolitan city of San Francisco; but there was something distinctive about this, as there was also about the odd looking proprietor of the place.

He was very carefully dressed in fine clothes, but his face and hands and rounded shoulders bore evidence of a life of toil and hardship. Rough and rugged he surely was, but his countenance beamed with honest good-nature, and a sort of whimsical humor lurked in his blue eyes. How came he to be in this place? I wondered.

"Yes, sare," he was saying, as he put down upon the counter a glass of violets, "I h'am pretty fon' of flower, but I ain't nevare tink to buy dem jus' for me. No, sare, dat's for ma seester," he added gently, and, after a slight pause, "I'll tol' you 'bo't dat, eef you got tam, an' eet ain't bodder you too much."

His wistful look was irresistible, and so was his droll speech, to which no pen can do justice.

"Yes, certainly," I replied, "I have time enough and I'd like to hear the story, Mr. ——?"

"Lafontaine, *m'sieu'*, my name dat's Toussaint Ouézime Lafontaine. T'ank you, *m'sieu'*, take a chair; w'en we tell somebody h'all w'at we got of trouble on our 'eart, dat's make it seem more h'easy, don't it? Well, sare, 'bo't ma seester—I be'n h'offle fon' of dat seester. You see, w'en we are small we h'all at 'ome 'ave *la picotta*—you see?" pointing to his scarred face, "dat's *la petite vérole*, but we call 'eem *la picotta*, an' dat's ver' common wid de French Canadians. Well, we h'all die h'excep' me and Noémie an' dat's make dat we h'are more fon' of h'each odder, some way. I guess you ain't nevare see a more pretty girl dan Noémie; 'e ain't 'ave 'ardly h'any *picotte* lef' on 'ees face, and 'ees w'ite—*'blanche et belle'*, we say, we odders. An' e's gay lak a bird. You know dat bird, *m'sieu'*, dat bob-blink, w'at seeng lak e's laugh 'eemself to det? Dat's Noémie, laugh and seeng h'all day; 'an' 'h'always gentle an' sweet, an' do something to make h'everybody 'appy—*chère petite chatte, va!*"

He paused to brush away a tear and heave a great sigh.

"Well,. 'e's get married wid a feller. *Sacré tonnerre!* W'at for 'e ain't die lak de res'! *Pauvre petite*, 'e ain't want dat feller, 'e don't lak 'eem mos' as bad as me, and me—I 'ate 'eem!

"Dat's ma modder done dat. Ma modder 'e's tink dere ain't notting on dis worl' lak to be reech; and Nazaire Gagnon, 'e's got a good farm close by to 'ome, an' 'e's got leetle money on de bank, an' 'e's great fren' wid Cure Lefort; so ma modder an' Cure Lefort dey make Noémie get married wid 'eem. Ma poor Noémie! 'e ain't laugh much h'after dat, an' 'e ain't seeng needer; dat's work, work, work, an' notting h'else, h'excep' children, an' dey mos' all die—dat's a good job for dem too!

"An' 'e's *mean*, dat Nazaire — I'll bet you ain't nevare see such a mean cuss lak dat. Get dronk? No, sare, 'e's too mean for dat — too tough, too steengy! I ain't say 'e ain't dreenk no w'eesky; some tam w'en somebody 'll treat, an' some tam on de 'lection 'e's get pretty fool, (full) but dat ain't make much deefference. By golly!" said Toussaint, with a whimsical smile, "eef dat make 'eem *good* nature, we h'all pay de w'eesky! 'E's treat Noémie lak eef 'e be'n slave. De poor girl can' nevare 'ave some pleasure wid 'ees fren', dat's cos' too much for 'ave companie; 'e h'ain't nevare 'ave some good clo'es; an' Nazaire, 'e's cross lak de debble — say de mos' meanes' ting w'at can pass on 'ees min'. Oh, *ma foi*, I can' tol' you h'all w'at dat man can do for wear de 'eart away, an' starve de soul of some one gentle lak Noémie!

"Ma modder, 'e's h'offle sorry for dat, but dat's too late, 'e can't nevare h'undo dat job.

"Well, sare, me, I can't stan' it; I be'n 'fraid dat sometam I'll keel dat dam Gagnon! So I've lef' de country an' come on Californie. Ma modder 'e's dead soon h'after dat, an' poor Noémie 'e's lef' alone — ma fadder 'e's dead since a long tam before Noémie get married.—Well, sometam Noémie sen' me letter, w'en Nazaire ain't know it. 'E's got two boy — dey're jus' de same lak d'eir fadder — an' 'e's got one girl, Rosalie; dat's pretty good girl, too; but 'e be'n 'ave mos' de same luck lak 'ees modder; h'only de 'usban', dat's Narcisse Pilon, 'e be'n more kan' dan Nazaire. I *guess* Narcisse 'e's mean to be pretty good to Rosalie, but 'e ain't dezackly know 'ow!" another twinkle of Toussaint's blue eyes.

"Well, sare," he continued, "Nazaire 'ee's dead one day, by a haxidan (accident) an' true-sa-leeve a'm glad of eet! You tink dat ain't ra't, I sup-pose, *m'sieu'*, but you ain't know Nazaire Gagnon, dat's make de deefference. Now — I be'n say at mase'f — I guess Noèmie 'e's go-ing to 'ave better tam. But 'e ain't feenish to suffer yet.

"Dose boy — *diables qu'ils sant!* dey 've hang 'ro'n an' dey've manage to get mos' h'all de prop'ty on deir 'an' den dey've clear out. Well, Narcisse, 'e's got de res' of de money an' 'e can't *rij*-fuse to take de modder on 'ees 'ouse; an' I guess Noémie 'e's come pretty near to be 'appy dere; for Rosalie 'e's h'offle good to 'ees modder, an' Narcisse, 'e ain't say *much*."

Here Mr. Lafontaine paused, looking steadily down to the floor, as he leaned his arms upon his knees.

"Well, sare," he resumed, drawing a heavy sigh, "dat's a hard worl, ain't it?

"Poor leetle Rosalie, 'e's die, an' pretty soon Narcisse, 'e's got anodder waf, an' dat's *mos'* h'all w'at Noémie can bear; 'e don't got no more courage. H'after w'ile 'e 'ear dem say dey go-ing to put 'eem on de poor-'ouse—I be'n forgot to tol' you dey've move on de State before Rosalie 'e's dead, an' dat be'n anodder troub' for Noémie—leave h'all 'ees 'ol' fren' an' country, an' 'e can't spik de H'anglish needer. Dat's make you laugh on me, don't it? Well, dat's a fac' I ain't spik 'eem ver well, but I make ma *affaire* wid 'eem. Well, sare, because Noémie 'e's h'ol' an' seek, an' can't work no more, dey say go-ing to put 'eem on de poor'ouse. But 'e's got one 'ope lef' on dis worl', an' 'e's beg Narcisse to wait for dat 'e'll wrat to 'ees brodder; so Narcisse 'e ain't say notting more, for dey h'all tink a'm h'offle reech o't on Californie—somebody be'n tol' dat. Well, dat's a fac'; I be'n make some money on de mine, but I loose 'eem ra't off again. *Mon Dieu*, dat 'll break your 'eart eef you read dat! 'E's beg me to come an' save 'eem of dat deesgrace; 'e's spik abo't de tam w'en we are h'all two so 'appy togedder, in dat spring-tam of our young 'eart, on de h'ol farm on Lachine; an' 'e say 'e ain't for long tam on dis worl' to make me some

troub, an' 'e know dat Toussaint Lafontaine ain't want 'ees h'ol' seester die on de poor'ouse, w'en h'en so reech. H'excuse me, *m'sieu'*," said the poor fellow, wiping his eyes vigorously, "I can't 'elp to cry, w'en I tink abo't it."

I couldn't "help to cry," either, and seeing the tears in my eyes, Toussaint appeared to be comforted; for with one of his deep sighs, a regular upheaval of the thorax, he continued his story.

"W'at make me feel 'shame, so I can't 'ol' up *ma* head, dat's we'n I tink 'ow I be'n desert 'eem long ago, eenstead to stay an' watch for some chance to 'elp eem; but 'e ain't nevare make me no *rip*-proach, ma poor girl, h'always so gentle, h'always forgeeve to h'everybody! Well, sare, I ain't put much tam to make some plan; I've make a vow ra't dere to make honor to ma seester, an' make dat 'e'll die 'appy. I've got some money on de bank. I've work pretty 'ard for earn dat money—some tam on de mine, some tam grobe (grub) de ranch, chop de h'ood (wood)—oh, h'every kan' of ting w'at I can do. Many tam I go hongry, an' mos' bare feet, so I'll save de money for w'en I be h'ol an' can't work; for me, I don't wan' to die on de poor-'ouse needer. Well, I got to leave dat to *le Bon Dieu*. I be'n tink to go do'n to Los *Angelus* and buy me small ranch for keep de bee, but I ain't tink abo't dat no more," he said, with a resolute sweep of the hand, as if sternly waving away a temptation.

Then his whimsical, humorous look came back, and he said slyly:

"Dey tink Toussaint 'e's reech, eh? *Eh bien!* I say, I show dem 'ow we do something on Californie. Den I've buy me som fan' clo'es—oh, by golly! dat's make me laugh see Toussaint Lafontaine dress up lak dat! An' eef you'll see me, 'ow I'll scrob, scrob, scrob ma han' for make dem look lak eef dey ain't work, you'll laugh, too. I'll go on a drug-store an' ask for something for make sof' ma han, an,' w'ite; an' eef you'll see 'ow dat clark 'e'll green (grin)—'e's tink for sure a'm go-ing to get married! Well, by de tam I get to Narcisse Pilon, back on Mass'chusit', a'm look pretty reech. I've got h'always some glove on ma han', I've got damon peen on ma bosom—dat's cos' me tree dollar on San Francisco, but dey ain't know de deeference do'n to Mass'chusit!" I wish I could put upon paper his droll inflection and the touch of contempt with which he disposed of "Mass'*chusit*."

"I've got beeg gol' watch an' chain, an' I got plenty gol' piece on ma pocket. Oh, I'll bet a'm reech! Eef you'll see 'ow dey are *po*-lite to *m'sieu'* Lafontaine from Californie—pah! dat's make me seek some tam.

"But, Noémie! eef you'll see 'ow she's been glad, an' 'appy an' proud! You see, dat's a long tam before I got 'ees letter, I be'n move ro'n de country so much; an' w'en dey ain't 'ear notting, Narcisse, 'e say I ain't such a fool to bodder maese'f' 'bo't a h'ol woman lak dat; and dey get ready to start 'eem off on de poor'ouse. 'E's got few ting tie h'up in a h'ol' shawl; but de sam tam 'e's pray *le Bon Dieu* for Toussaint, an' dere I h'am!

"*Mon Dieu, m'sieu'*, w'en I see dat poor h'ol seester, I tink I h'am going to break ma heart! 'E ain't much h'older dan me, but for sure you say 'e got twenty years more. To grow h'ol' wid many year, lak w'en de grain ees h'all rap' for de 'arves'—dat's all ra't—dat ain't make us feel sorry; but w'en we see somebody w'at we love grow wreenkle, bend h'over, sad an' gray by pain an' sorrow, dat's make us feel h'offle! I 'ope you nevare will see dat, *m'sieu'*.

"Well, I don' stay dere long. I make a journey to Lachine; dere I 'ear many sad ting abo't Noémie, an' w'at 'e be'n suffer. Dey h'all are so glad I come to 'eem; an' dey make me so many compliment for make such gran' beesness on Californie. I be'n feel lak a t'ief wid all dat

good clo'es, an' dat brass chain, an' dat 'damon'! I feel lak to cry, oh, *chers vieux amis*, don' look so to me! I h'am not reech, I h'am more poor dan you odders! But for love of Noémie, I say notting: but I ain't stay ver long tam. Den I take Noémie — dey be'n dress 'eem up w'ile I go to Canada — an' we come on Californie.

"Well, I tink I'll confess, den; dat I h'aint so h'offle reech; but I've see dat Noemie 'e's h'offle weak. So, I've call a doctor; 'e say t'ees mos' over wid 'eem — dat 'e's h'all wear out, an' we can not do much for 'eem — jus' to keep 'eem 'appy and well nourish, plenty good food — delicate ting.—Den 'e's look on ma face sharp an' say, 'You got plenty money?' Den I be'n tol' 'eem someting 'bo't dat. 'E's blow ee's nose pretty 'ard, an' 'e's got offle 'urry to go!

'All ra't, ma good feller', 'e say, don't bodder abo't dat beel, w'en I want some money bad I h'ax you for 'eem, call on me, w'en you want; good-day!'

"So I ain't tell Noémie notting. I've rent two tree furnish room wid a French familee; dat a steel (still) place wid plenty sone-shine; not a fashionable street, but Noémie ain't know dat; 'e's tink dat fine. *Madame Mère* 'e's ver kan' to 'eem; an' 'e's got a young girl w'at wait on Noémie, an' read to 'eem, an' do many ting to h'amse 'eem. H'every body love Noémie, an' make so many pleasure for 'eem — 'e's 'appy lak a queen. I do h'all w'at I can to save de money, but h'always I do someting to look lak eef a'm reech. An' I pray *le Bon Dieu* to forgeeve me of all does lie w'at I make. I be'n take dis place from somebody w'at 'e wan' to go on de country for ees 'ealt' for few mont' an' I make somting on de business, but not much. I don't buy no lonch, but I take de price an' buy some flower for Noémie — lak dese violet — an' eef you'll see 'ow 'e's glad an' proud of dat at-tention! An 'e'se tink dat such a won' a' ful ting to 'ave all dose beautiful flower in de winter. An' 'e b'en starve for flower too, for Gagnon ain't nevare allow dat r'on' 'ees 'ouse — dat's take too much tam for such a foolishness! But 'e's got plenty now, *pauvre fille!*

"I be'n take 'eem h'all ro'n' on de green 'ouse, an' on de Park, an' on de country; but dat make 'eem too much tired now, so 'e stay quiet on ees' room, close on de beeg weendow w'ere de sone shine h'all day — smell ees flower, look on de bay, an' make ees prayer, wid Clotilde for read, and *Madam Mère* for talk wid 'eem an' make de musique some tam. Den I come at 'ome an' bring some more flower, an' tell someting drole w'at 'appen on de store, or h'on de street; or, eef dere ain't notting 'appen, I tell 'eem h'all de same! Den we 'ave a fine deener an' talk some more, an' den we make our prayer togedder, an' Madame put Noémie on 'ees bed; an' dat's anodder 'appy day feenish. Oh, eef I can keep 'eem h'always lak dat! But 'e h'aint for long tam now. An' de money ees mos' gone too; but I guess dat hol' out."

"And then —?', I suggested.

"Oh, well, den, *m'sieu'*, I go on de country some more. Ma fan' clo'es, dey begin to wear out. I shall put on ma blouse an' h'overall some more, an' den adieu *m'sieu'* Lafontaine — dat's Toussaint again, ready for h'earn some more money!

"I be'n tol' you h'offle long story, ain't it, *m'sieu'*? An' I tank you for leesten wid such a patience — H'*ex*-cuse *me* eef I bodder you too much."

He turned away, brushing his eyes with the back of his great hand. I told him I would like to pay his sister a visit some day. He was delighted, and replied that he would be glad to take me "at 'ome" any day.

But I was suddenly called out of town and did not return until a few days before Easter. Feeling anxious to know how Mr. Lafontaine was getting along, I went at once to see him.

PART II

EASTER GLORY

"Ah, *m'sieu'*, dat's mos' h'over now, for sure!" said Mr. Lafontaine, shaking his head sadly. "De doctor say Noémie got h'only few more week, maybe not so long. But eef you please to come wid me, *m'sieu'*, I show you de flower w'at I buy for make 'eem de h'Easter present."

"Eef you please, I lak to show to *m'sieu'* de h'Easter flower," said Mr. Lafontaine to the florist.

"All right. This way, please."

We followed him down several steps into a tiny greenhouse. I was prepared to see an Easter lily. Imagine my surprise when the florist stopped before some rare orchids. To see the look on that homely, tender old face bending over those spirit-like flowers!

"*Saint-cœur-de-Marie!*" he exclaimed, with his hands clasped, as if he stood before a shrine. "Ain't dat look lak eef 'e came from heaven? W'at Noémie go-ing to say w'en 'e see dat?

"Dis one ees mine *m'sieu'*," pointing to one that was nearly ready to blossom. "Dat's h'all mine, de 'ole (whole) plant; Noémie is go-ing to 'ave de 'old teeng—dat flower of Paradise!" he cried with childish delight.

"But, my poor fellow, that is very costly," I exclaimed.

"W'at dat make," he answered gaily. "For a reech man like *M'sieu'* Lafontaine of Californie, dat's notting."

"I be'n pay 'eem seence long tam, ain't it, *m'sieu'*?" he said, turning to the florist. "I buy dat on de *h'eenstallman* plan; I pay someting h'every Saturday. To-morrow I pay de las' h'eenstallman, and dat's belong to me! You sure dat's h'open Sunday morning?" turning anxiously to the florist.

"Yes, and perhaps to-morrow, but if not, you can have one of these; you shan't be disappointed, Tousaw, said the man, kindly.

"Tousaw" drew a sigh of relief.

"Now, *m'sieu'*, eef you will come at ma house?"

Turning down a quiet street, we soon came upon a small plaza, with a delightful view of the bay, and here Mr. Lafontaine stopped before a pretty cottage.

"You shan't say notting 'bo't dat flower, ain't it?" he whispered, as he led the way up the stairs to a charming little parlor, bright with pictures and flowers, and a cheerful open fire. In the sunny bay-window, a sweet-faced old lady lay upon a couch, with a profusion of soft cushions and gay spreads about her. A young girl sat at her feet; she had been reading to her.

"*Ma soeur*," said Mr. Lafontaine, speaking in their own quaint Canadian French, "I present you my good friend, *Monsieur* Blanc. Since a long time, he wishes to pay you a visit. *M'sieu'*, my sister, *Madame Gagnon*."

If *Madame Gagnon* had been royal, he could not have been more respectful; and I bowed with sincere reverence over the poor thin hand of the old Canadian woman.

Truly it was hard to imagine in her the "*blanche et belle*" *Canadienne*, laughing and singing, "gay lak a bird," by the shores of their bright St. Lawrence; and yet, white and beautiful she was now, her delicate, sweet old face set around with soft, white hair, under the border of fine lace; for she wore the cap that the old Canadian women always wear. And though the lines of care and toil, of heartbreak and bodily pain, crossed and recrossed her face, I could still find a trace of the beauty of which her brother had boasted.

Perhaps it was coming back to her, in this serene sunset of her life, her soul resting in the tenderness of this chivalrous, dear brother, even as her frail body reposed upon the luxurious pillows of her couch—loved, honored and caressed as she had never been

since her girlhood, surrounded by luxuries of which she had never even dreamed in her hard life, all unconscious of her brother's sacrifice, but imagining that it all came from a plenteous store in this wonderland, where all day long she felt the blessed sunshine, breathed the fragrance of rare flowers, and gazed upon the beautiful blue water and the great, gliding ships!

While this was passing in my mind, she was speaking softly to her brother, and admiring the roses he had brought her.

"Put them here, Clotilde, where I can see them and smell them. Is he not kind, *m'sieu'*, this dear brother?"

"Very kind, Madame," I answered, "but it is a pleasure to him to have some one that he loves in his home."

She gave him a fond, proud smile, but said nothing.

"You have a fine view of the bay," I continued.

"Yes, *m'sieu'*, I like that; sometimes I look at it so"—half-closing her eyes—"and I think it is our dear St. Lawrence going down so grandly to the sea. But I think not often of that, for it brings sad memories, and here I am so happy! Often I say in my heart: Surely Purgatory is passed and Heaven is begun!"

"Saints don't pass through Purgatory, my sister, they go straight to Paradise."

"Yes, but I am not a saint, me, flatterer!"

"You'll see what St. Peter is going to say about that," said the brother, stoutly, with one of his droll smiles.

But perceiving that the poor old soul could not endure so much talking, I soon made my adieus and withdrew.

"Come to see us on Easter, *m'sieu'*," said Toussaint, as he followed me through the door and down the stairway.

"W'at you tink, eh, *m'sieu'*?" he asked in his old eager manner, as we reached the outer door.

"I think that you are a noble fellow, Toussaint, and that your sweet old sister is worth your sacrifice. And, Toussaint, my friend, remember this, 'the blessing of the Lord, it maketh rich.' You will never die in the poorhouse. Yes, I am coming to see you on Easter day; I wouldn't miss it for a visit to the President!"

"Dat—dat's h'll r'at, *m'sieu'*" stammered the poor fellow, drawing his hands across his eyes and softly closing the door.

Easter morning—how brightly it dawned! As I looked upon the rose and violet and silver of the sky, I thought of Noèmie and her "flower of Paradise." At church, too, all in the beauty of the flowers, I seemed to see that patient, sweet old face crowned with light and splendor; and throughout all the glorious service I seemed to hear the soft voice murmuring gladly, "Heaven is begun."

That afternoon I went to pay the promised visit. Clotilde opened the door for me; her eyes were red with weeping and she said not a word. I followed her up the stairs. At the landing she laid her fingers on her lips, and gently opened the door.

There sat Toussaint, alone, bowed down, his face buried in his hands and tears falling through them.

Beyond—in the alcove—ah, yes, it was all over at last. Noémie was gone; only the poor old body, turning to marble, lay upon the bed. Tall candles burned at head and feet; two nuns, a little way withdrawn, softly intoned their prayers; and there, where a ray of sunshine made its way, shone the wondrous blossom, her flower of Paradise.

"Come with me, my poor fellow," I said, taking Toussaint by the arm and leading him away, "try to tell me about it."

"Well, sare, dat's happen abo't nan' o'clock dis mo'ning, I've put dat flower here on 'ees table, on de soneshine; an' w'en 'e wake h'up, I've pull de portiére an' say, '*Eh donc, ma chére*, look you h' Easter presen'! 'E' ain't see ver well, so I've take

'eem h'all wrap wid een ees blanket and put 'eem on de sofa, jus' w'ere 'e can look on de flower.

"*Mon Dieu*, eef you see dat face! An' 'e's put ees two han' togedder en ees bres' lak eef 'e make 'ees prayer; an' 'e say, all sof'lee;

"*Mon frere, ca viens du Ciel! C'est un ange qui m'apporte ca!*"

(My brother that came from Heaven; it was an angel that brought it to me!)

"I ain't say a word.' E's look long tam, long tam on dat flower, an' I nevare see such a 'appy face lak dat! Dat's make me tink 'bo't w'en we are h'll two children togedder, an' we 'ear some music on dat h'ol' church on Lachine, an' I tink I see dat *petite Noèmie* on 'ees knee dere, wid ees 'an togedder lak dat, an' 'ees face sweet lak a h'angel, leef' up to de *Madonne* wid de *Enfant Jesus* on 'ees h'arm an' de *guirlandes* of w'ite roses on 'ees 'ead.

"Bomby, Noèmie say, 'Toussaint, come to me.' An' I go kneel do'n dere, an' 'e's put 'ees an' on ma 'ead, an' 'e say, 'Good-by, now, *mon bien aimè*, I tink I mus' go. 'Te'es sad to leave you alone on de worl', but *le Bon Dieu* weel take care for you, an' bless you for be so good to me. An' pretty soon, you come, too, an' we be all togedder dere; an' we weel 'ave many of dese flower, h'all w'at we want.'

"Den 'e's turn 'ees face to look on dat flower, an' smile, an put 'ees han' on 'ees bre's'. An lak dat ma Noèmie e's gone!"

Toussaint hid his face again and wept. I turned to the window to hide my own emotion. The bay was shining like silver; a ship moved slowly out to sea.

H'excuse me, *m'sieu'*," said the poor fellow, presently, "but dat's h'all w'at I've got to love on de worl'—dat's de las' one; an' now I go away, poor an' alone!"

"No, my brave Toussaint," I said, "there will be friends for you wherever you go; here, at least, you will always have a faithful one; and while I have a dollar you shall not want. So be of good cheer."

I will never forget the look which answered me!

What became of him? Well, he's down in 'Los *Angelus*,' on his bee ranch; be bought it, with a little help from me, on the 'h'eenstallman plan.' It is nearly paid for now. What is better, he has a good wife—*Madame Mère*, in fact, the mother of Clotilde—and two pretty children, a little Noémie, and one that I am proud to say, is named for me.

As for the Easter flower, come into the conservatory and I will show it to you; it is just in bloom—it is a fine *Cattleya*, and there isn't money enough in San Francisco to buy it from me.

THE NICARAGUA CANAL—HISTORY AND TECHNIQUE

BY WILLIAM LAWRENCE MERRY
Consul General Nicaragua

THE splendid profession of the Civil Engineer finds in the Nicaragua Canal a source of gratification and delight I have conversed with very many practical men who have passed over the route, and when they have been shown the skill with which the project has been developed, their admiration has always been unbounded. As remarked by Senator Morgan of Alabama, "the most fervid imagination is surprised and captured by this splendid reality." As the result of engineering skill here is a summit level of navigation one hundred and fifty-three and one-fourth miles long, and one hundred and ten feet above sea level, reaching within three and one-half miles of the Pacific and twelve and three-fourths miles of the Atlantic Oceans. From each end of this summit level a gun can be heard on either ocean! This splendid result has not been attained without arduous labor and great engineering skill.

The availability of the Nicaragua Isthmus for a ship canal was urged in 1550, by Antonio Galvao. Since 1822 the United States government has had its attention repeatedly called to the advantages of the location for canalization, and in June, 1826, the first private contract was made for the execution of the work, which failed, owing to political and financial reasons.

De Witt Clinton, the builder of the Erie Canal, was one of the leading spirits of this primary effort to unite the oceans. In 1837 and 1838, a survey was made by civil engineer Bailey, under instructions of the then united Central American government. In 1839, John L. Stephens made an inspection of the route, as thus surveyed, for the United States government. On the 8th of January, 1846, the government of Nicaragua gave Prince Louis Napoleon Bonaparte power to organize a European company to build what was to be called "*Le Canale Napoleone de Nicaragua.*" His election as President of the French Republic changed the scope of his ill-starred ambition, but he was always an advocate of this canal route, and doubtless it was due to his influence that Count De Lesseps endeavored to obtain a concession to build the Nicaragua Canal, failing in which he took up the Bonaparte-Wyse concession at Panama, which has proven such a disaster to French pride and finance. In September, 1849, Vanderbilt and associates obtained a concession for an interoceanic canal, and in 1850-51, Colonel Childs made a careful instrumental survey of the route, which was referred to United States topographical engineers and by them pronounced feasible. The canal proposed by Vanderbilt was not built and the concession was forfeited. I am informed by Hon. John T. Doyle of Menlo Park, who is familiar with the conditions, that the project was favorably regarded by English financiers, but was finally dropped for the alleged reason that the proposed canal was not of sufficient depth for the large ships of the English mercantile marine and navy, and they did not care to encourage what would become practically an American coast wise transportation route.

Vanderbilt had meanwhile obtained an additional concession from the Nicaragua government and organized "The Nicaragua Accessory Transit Company." Under this concession he laid the foundation of his colossal fortune, and transported many thousands of passengers to and from California at highly remunerative rates. He had to encounter the competition of the Panama and Tehuantepec transits, but he understood the

policy so well developed at a later day in the Pacific States of charging "all that the traffic will bear."

In 1858, Nicaragua and Costa Rica jointly conferred on Felix Belly of Paris a concession for a canal on the Child's route. At this time the Walker filibuster war and subsequently the commencement of civil war in the United States had a discouraging effect on the project and before Belly could raise the funds necessary, the concession lapsed. From 1852 to 1880 many explorations were made at various locations, some by private parties, but the most important by the United States government. The Nicaragua route was surveyed by Commander E. P. Lull, U. S. Navy, with A. G. Menocal as civil engineer, in 1872-73. Captain Lull was well known on this coast, and last visited San Francisco in command of the glorious old flag ship *Hartford*, now permitted to rot ingloriously in the mud at Mare Island. Civil engineer Menocal, U. S. N., still survives, and has honorably associated his name throughout the world with this great enterprise, while his gallant commander has gone over to the majority, too early to see his convictions as to an interoceanic highway realized. The result of these various surveys developed only eight routes worthy of instrumental investigation, viz.:

Name	Length	Altitude
1. Tehuantepec,	150 miles	755 feet
2. Nicaragua	169 miles	153 feet
3. Panama	41 miles	295 feet
4. San Blas	30 miles	1145 feet
5. Caledonia-Turya	87 miles	1008 feet
6. Atrato-Turya	115 miles	800 feet
7. Atrato-Truando	125 miles	950 feet
8. Atrato-Napipi	180 miles	778 feet

It will be noted that the Nicaraguan has the lowest elevation and the San Blas route the shortest distance between the oceans. In fact, at San Blas, the ocean tide waters approach within twenty-three miles of each other.

In 1872, President Grant appointed a commission consisting of General Humphreys, Chief of Engineers, U. S. Army, Captain Patterson, Superintendent U. S. Coast Survey, and Admiral Ammen, U. S. Navy, to report upon the subject with recommendations. The report is dated Feb. 7th, 1876, and may be epitomized thus: "That the Nicaragua route possesses both for construction and maintenance, greater advantages, and offers less engineering difficulties than any of the other routes."

In 1876–77 and in 1884–85 civil engineer Menocal, U. S. Navy, made careful additional surveys in Nicaragua under order of the United States Government, making improvements of importance in the surveys. In March, 1887, the present concession from the Nicaragua government was obtained, and since November of that year the canal company has run not less than four thousand miles of survey with transit and level, in locating definitely the canal line. Borings have been made at stated locations on the line so that the Company's engineers know precisely the character of the material to be excavated—the samples are at the New York office for examination by experts and contractors.

I have been thus precise that the reader may understand how carefully the canal company has prepared itself for the great work before it. I am informed, in fact, that it has expended over half a million dollars in ultimate surveys. Let us now examine how the canal is constructed.

From San Juan del Norte, the Atlantic terminus, to Brito, the Pacific terminus, the distance is one hundred and sixty-nine and one-half miles.

The navigation is one hundred and forty-two and two-thirds miles in lakes, rivers and basins, and only twenty-six and three-quarters miles in excavated canal.

The route may be divided into four divisions, viz.: the Eastern, the San Francisco, the River and Lake and the Western.

Eastern Division, from San Juan del Norte to San Francisco basin, eighteen and seven-eighths miles. This reach

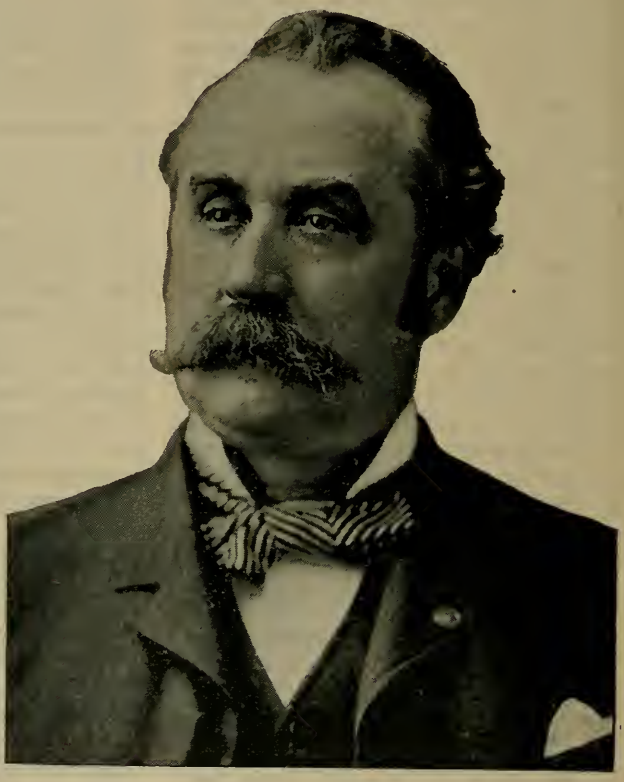
will be at the sea level, with a bottom width of one hundred and twenty feet, surface width, two hundred and eighty-eight feet; depth, twenty-eight feet.

The cross section is five thousand seven hundred and twelve square feet against three thousand seven hundred square feet at Suez. This reach is practically an extension of the harbor, wide enough to permit a line of the largest ships to lay at one side, and leaving ample space for other ships to pass. The ground is entirely alluvial and will be excavated entirely by machinery. About one mile of this has been already excavated to a depth of seventeen feet, the "first cut" of the Slaven's dredges.

Lock Number one will have a thirty-one foot lift, and, like all others on the line, will be six hundred and fifty feet long, by eighty feet wide, ample dimensions for two ships of two thousand five hundred tons each. The foundation of this lock is a stiff tenacious clay. All the locks will be built of solid concrete masonry and iron.

Lock Number two will be one and one-quarter miles beyond the above. Through the intervening space flows the little brook, Deseado. A dam connected with the lower lock will raise the water twenty feet above the bottom of the valley, and through the flooded area the canal passes, only partially in excavation, to the second lock; lift, thirty feet, located in hard ground. This raises the water level to sixty-one feet.

Lock Number three, with a forty-five foot lift, is twelve and three-quarters miles from the Atlantic and very nearly two miles from Lock Number two. The Deseado is here spanned by other embankments of one and one-third, miles aggregate length, and average height, twenty-one feet. By these means an artificial lake is created over three miles long, with depth from thirty to seventy feet, without excavations, except in spots aggregating one-third of a mile. The water in this basin is maintained at one hundred and six feet above sea level. Immediately above each lock is a large basin, the utility of which is obvious, as they furnish abundant water for the locks, without appreciably altering the canal level above.



Senator Warner Miller. President Nicaragua Canal Company

The "Eastern Divide" Cut, three

miles beyond the third lock begins the heaviest cut on the line. This cut enables the vessel to pass at one level from the Atlantic Coast proper into the San Juan River Valley, that portion of which is used being inundated, the whole region in the vicinity becoming an extension of Lake Nicaragua.

This dividing ridge is a spur of the Cordilleras, two and nine one-hundredths miles wide, with an average cut of one hundred and forty-one feet to the canal bottom. The material to be excavated is mostly solid rock, permitting minimum excavation and permanent slopes. This rock

Doctor Don Roberto Sacasa
President of Nicaragua

will be used for the Ochoa dam, the breakwater at the Atlantic terminus, and as rubble for pitching the canal banks. On both sides of this cut is an ample water-power, which will be used for driving excavating machinery and for lighting the works. The time necessary to complete this cut is the measure of time needed to complete the canal, other portions of which can be constructed simultaneously. Contractors have guaranteed the completion of this cut in four years.

The San Francisco Division. From the divide to Ochoa dam, twelve and one-half miles. Near the crest of the dividing ridge rise two brooks, the Deseado and Limpio. By utilizing their beds, the work of uniting their drainage channels is greatly reduced. For three-quarters of a mile after leaving the divide, the bed of the Limpio must be deepened an average of sixteen feet to gain the requisite depth for navigation.

The Ochoa dam, one thousand nine hundred feet long, seventy feet maximum height, raises the surface of Rio San Juan to level of the lake. Between the divide and Ochoa, embankments with an aggregate length of sixteen thousand seven hundred and seventy feet, and a maximum height of sixty feet are needed, as the surfaces do not always rise to the canal level. Of the San Francisco basin, eight and two-thirds miles will be in flooded valleys, many times the required width, and from thirty to sixty feet deep. Of the remainder two and one-half miles will be partly and one and one-fourth miles entirely in excavation, the material being clay. The advantages of the San Francisco basin are obvious, affording unimpeded navigation through a wide channel, where ships can pass each other at ocean speed, and also vastly simplifying the problem of drainage. It is a remarkable feature of the surveys, possible only in a surface canal.

Lake and River division. The Ochoa dam will hold the waters of Rio San Juan permanently to a height of one hundred and six feet above the sea. The lake level being one hundred and ten feet, the difference, three-quarters of an inch per mile in the sixty-four miles river, gives the slope necessary for a free discharge of lake and river waters, about twenty thousand cubic feet per second, at about three-quarters of a mile per hour current.

This dam secures navigation in slack water all the way to Lake Nicaragua. With the exception of twenty-eight miles above Toro rapids, the channel will be one thousand feet wide, and from twenty-eight to one hundred and thirty feet deep. Rock

blasting and dredging above Toro to the lake will be required to an average depth of four and one-half feet, in all for twenty-four miles. With the river channel here deepened, it will have a width of one hundred and twenty-five feet at bottom, and five hundred to one thousand five hundred feet at surface. At three points the river bends will be improved, decreasing abruptness of curves.

Dredging in Lake Nicaragua to an average depth of ten feet in soft mud, bottom width, one hundred and fifty feet will be necessary for fourteen miles from the shore, to secure a navigable channel thirty feet deep.

Lake Nicaragua is an inland sea, one hundred and ten miles long and forty-five miles wide, oval in form, with a depth in its center of one hundred and thirty to one hundred and fifty feet, its bottom in places below sea level.

From the San Juan outlet at Fort San Carlos, to the mouth of the brook Lajas, where the canal leaves the lake for the Pacific terminus, is fifty-six and one-half miles. For more than forty-two miles the depth is from thirty to one hundred and fifty feet. The west coast of the lake near the canal is shoal for one thousand four hundred feet, and deepening will be required here also. It has been estimated as rock, such being the indications near the shore. Lake Nicaragua is the great physical feature of the canal. It is a magnificent sheet of water, surrounded by a beautiful and productive country. As the traveler stands on its shores, its waves dash at his feet with the cadence of an ocean surf, and sky meets the water when he looks for the opposite shore! The trade winds blow across it almost perennially, creating a splendid climate, with nights cool enough to require a blanket to sleep under. It is the Gateway between the Oceans and in the pathway of the world's commerce, secures to the Republic of Nicaragua a great future. Jointly with Lake Momagua with which it is to be united by a short canal, with one lock of twenty-four feet lift, it secures to Nicaragua cheap internal transportation. The surrounding country is very fertile and produces cocoa, coffee, indigo, maize and every fruit known in the tropics. It is a country with a glorious destiny and with a future history which will attract the attention of all nations.

The Western division. From the lake to the Pacific seventeen and four-hundredths miles of this distance, eleven and one-half miles will be in excavation and five and one-half miles in the Tola basin. The excavated portion joining the lake to the basin is nine miles long, the deepest excavation piercing the Divide between the lake and the Pacific by a cut forty-three feet above canal level and one hundred and fifty-three feet above ocean level. For a distance of five miles through the deepest cutting, principally rock, a bottom width of eighty feet is provided for. The approach to this section, from the lake, one and one-half miles long, will have a bottom width of one hundred and twenty feet and a top width of two hundred and ten feet. Beyond the divide to the Tola basin the line follows the brook, miscalled Rio Grande, having a bottom width of eighty feet and a top width of one hundred and eighty-four feet. The Tola basin is five and one-half miles long, and no work whatever is required in it for four and one-half miles.

The Tola basin. A dam at La Flor, eighteen hnndred feet long and seventy feet high, inundates four thousand acres grazing and wooded land. The average width of the navigation line in this basin will be a mile, and the depth of water thirty to seventy feet.

Locks Numbers four, five and six, between the Tola basin and the Pacific, have lifts of forty-two and one-half feet each. Numbers six will have a variable lift, according to the tide on the Pacific Coast. From this lock to the Pacific, one and one-quarter miles, the canal will be at sea level; its bottom width, one hundred and twenty

feet, and top, two hundred and eighty-eight feet, making this section practically an extension inland of the Pacific terminal port, Brito.

San Juan del Norte, the Atlantic terminus, miscalled Greytown, a name not recognized by Nicaragua. Thirty years ago this was a capacious harbor. From well-known causes the entrance was blocked by sand. It is intended to build a breakwater three thousand feet long to the six and one-half-fathom curve, and to dredge a new entrance under its lee. This work is already constructed eleven hundred feet seaward, and has produced fifteen feet of water. Sea-going vessels of light draft now enter the port, to the Company's wharves. The entrance channel is to be thirty feet deep and five hundred feet wide at that depth. The harbor area will be about three hundred and fifty acres, exclusive of the inner bay, where there is now a depth of ten to twenty feet, with soft mud bottom.

Señor Don Evaristo Carazo, Late Ex-President of Nicaragua

Brito Harbor, the Pacific terminus, is an open roadstead, with one projecting headland. The brook, Rio Grande, discharges close to this headland, which is rocky and moderately high. At the mouth of the brook and beyond it, the beach is low sand and land behind it, for a short distance, low. From the headland a jetty nine hundred feet long will be constructed, into seven fathoms of water. Another jetty, normal to the beach, will be constructed eight hundred and thirty feet long, leaving an entrance eight hundred feet wide between the two, enclosing a small harbor, which will be added to by the enlarged prism of the Canal already alluded to, and extending inland to Lock Number six. Tola basin, only three and one-half miles distant, also affords a splendid fresh-water harbor of large area.

Capacity of the Canal. The experience at Suez has been profited by. It will have been noticed that the longest single reach in the Nicaragua Canal is less than ten miles long, and that passing-places are frequent and ample. There are but seventy miles where any work at all is needed to secure depth and width, and one hundred miles of free navigation will not need a dollar expenditure.

For a single lockage forty-five minutes are allowed. If one vessel only passes at a time thirty-two can pass in twenty-four hours, or eleven thousand six hundred and eighty in a year. If these are of same tonnage as at Suez Canal they will aggregate twenty million four hundred and forty thousand tons, involving day and night navigation, as at Suez. The estimated time for transit is placed at twenty-eight hours. The average time at Suez is twenty-four hours.

Cost of the Canal. The engineers' estimate of cost is sixty-five million eighty-four thousand one hundred and seventy-six dollars, including twenty-five per cent. contingency, but without interest during construction, bankers' commissions or discounts on securities to be disposed of. A conservative estimate of cost may be placed at ninety to one hundred millions of dollars. The Suez Canal cost ninety-four millions of dollars and paid nineteen per cent. dividends in 1891, the stock being now held at 500 per cent. Boards of advisary engineers have carefully examined chief engineer Menocal's estimates without material differences, considering the gross amount. Space forbids a detailed estimate of cost, but the prices allowed for different classes of work will be of interest to the student of the project.

	Per Cubic Yard
Dredging	20c @ 30c
Earth excavation	40c @ 50c
Rock excavation	$1.25 @ $1.50
Subaqueous rock excavation	$5
Embankments, earth from cuts	20c @ 30c
Embankments, rock from cuts	40c @ 50c
Embankments, earth from cuts	70c
Embankments, rock from cuts	$1.50
Masonry, concrete and stone,	$6 @ $10

Five million dollars have already been expended, and the work thus far has been done under the estimates. The description given of the Nicaragua Canal will perhaps be tedious to the general reader, but it is too short for the civil engineer and the student desiring to comprehend the project. Enough has been written, however, to indicate how carefully the surveys have been made, each additional one as an improvement on its predecessors. A firm foundation of engineering knowledge has been laid, and no money need be thrown away in construction, while every dollar has been made to tell thus far in work executed under the estimates.

Enough has been done to prove that the difficulty of the work is solely in its magnitude and cost. However, if the city of Manchester can afford to pay forty-six million dollars for a ship canal to connect it with the Mersey, we may hope that money will be found to pay one hundred million dollars for the Nicaragua Canal, which saves the circumnavigation of half a continent and the violent storms of the southern ocean.

The Nicaragua Canal Construction Company, under the able leadership of Hon. Warner Miller, is pushing the canal, having already expended, as above stated, five million dollars with excellent results. Senator Miller's well-known integrity and influence is a guarantee that the enterprise will be pushed to a successful conclusion. With him are associated some of the most influential men in the country—men who do not undertake a project to see it fail.

A bill is before Congress for construction under control of the United States Government. It is supported by the Administration, and its passage by the Senate appears assured, while its passage through the House of Representatives depends upon the absence of the party lines, which too often control our legislation. In no sense a party question, it receives the support of the most able men of all

parties, and it is to be hoped that, discarding the narrow plane of partizanship, the bill may be passed as a National measure and on the wider plane of its great advantage to our country.

But if this patriotic legislation is not to be obtained from Congress, the canal will nevertheless go on to a conclusion, probably ending under European control, to the lasting shame of partizan politics and the serious detriment of the Republic, politically and commercially.

The interoceanic canal has been a question of education—because Count de Lesseps succeeded at Suez, it was presumed he would succeed at Panama. Because he failed at Panama, it is still presumed by some (happily not many on this coast) that Americans will fail at Nicaragua. Only a few months since, one of the most prominent bank presidents in San Francisco told me that he had "no confidence in the Nicaragua Canal;" to-day his business associates are many subscribers to the stock of the Construction and Canal companies, and it is probable that his bank will be offering canal securities for sale in the near future. Why should it be otherwise? I have studied the problem since 1863, and have closely followed the development of the surveys, with a local knowledge attained by observation and residence. How can it be expected that a man shall believe that which he knows nothing about? Faith is applicable to religion; but it is not found in banking houses. However, the necessity for the Nicaragua Canal presses upon us with increasing force; our wisest statesmen advocate it; our merchants petition for it; our farmers demand it; our legislatures and conventions urge it as a national work of supreme importance.

To-day no intelligent man in the United States opposes it, except with an utterly selfish motive, and only a "still fight" can be made against it in Congress; it has become too popular to fight in the open. I meet people every day who thought I was a "canal crank" in 1880, but now tell me that I saw the light before it reached them, and they thank me for my steadfast advocacy of a project so beneficent to our State, to our country and to the world.

I merely had the opportunity to study it, which they had not, and I had the courage of my convictions in doing what I could for an enterprise which will double the value of every acre of land in California; a deliverance to the producer and the merchant; a pride to the Republic if our Government controls it; a disgrace to our country if Europe builds it, because we lack the ability to throw off the pernicious influences which too often are arrayed against the public welfare. What the Pacific Coast can do, if it is in earnest, is proven by the anti-Chinese movement. When it was first agitated, we had the whole country east of the Sierra Nevada against us. Now it is won over to our side, and our Eastern fellow-citizens are convinced that we were correct in demanding Chinese restriction.

We shall not have so long a fight with the Interoceanic Canal, because the question is not one of religion and the Utopian "brotherhood of man," even if the family is destroyed. New York, New Orleans, Savannah and Mobile demand the canal. From the Penobscot to the Rio Grande, and from the Atlantic to the Pacific, the producers and merchants are urging its speedy construction. The volume of public opinion will force action, I trust, in time to prevent Europe, with its selfishness and land hunger, from planting itself on the future highway of the world's commerce in Nicaragua. Politically, in a world-wide sense, and commercially, in every respect, it is the greatest question now before the people of the United States. They have solved questions far more difficult, and, in full faith, I close with the conviction that my countrymen

will find a speedy solution of this great question, so pregnant with advantage to themselves and to their children, and so glorious to the great Republic, if carried to a successful conclusion under its control. I recall the words of Grant, who had an American heart and an American soul in him, if ever man had. He wrote: "With due regard to our National dignity and power, with a watchfulness for the safety of our interests and industries on this continent, I commend an American canal, on American soil, to the American people!" Where is the American heart that does not say to those noble words, speaking to us to-day from his grave across the Continent—AMEN!

Hon. Warner Miller is a native of the State of New York. At the conclusion of the Rebellion, during which he served with distinction in the Army, he entered into commercial and manufacturing enterprises, in which he still has large and valuable interests. He served ten years in Congress, two terms in the House of Representatives and one term in the United States Senate.

Senator Miller is a quiet, self-contained man, who talks in a clear and concisive way, which carries conviction to the hearer. He is the reverse of visionary, and is not wanting in caution, seldom evincing enthusiasm, but always presenting his views with conservation. His influence is deservedly great, because his intelligence, ability and integrity are alike unquestioned. It is his honorable and patriotic ambition to complete the beneficent work which he has undertaken, and, if his life is spared, success appears certain to attend his persistent efforts.

His Excellency Senor Dr. Roberto Sacasa is the constitutional President of the Republic of Nicaragua. He is a native of the Republic, of Spanish extraction, and was educated in France, where he graduated with high honors as a physician and surgeon. President Sacasa is a warm friend of Americans and an ardent supporter of the canal. His expressed aim is to make an honorable and peaceful record of progress at home and honor abroad for his native country. He is a firm ruler, a warm friend and an able, patriotic citizen, of whom his countrymen may well be proud.

His Excellency Senor Don Evaristo Carazo, now deceased, was the President of Nicaragua when the canal concession was passed by the Government, under his guidance. He was a native of the Department of Rivas, Nicaragua, where his family still reside. President Carazo was beloved by his countrymen. He was a man of generous impulses and a warm heart. His industry and energy were remarkable. It was my privilege to be closely identified with him for three years on the Nicaragua Transit when California passengers and freight were being passed over the route, and I had an excellent opportunity to acquire an intimate knowledge of his character as well as to appreciate his true worth. He was a warm personal friend, and it is one of the regrets of my life that his noble heart went over to the majority before the auspicious day that both of us had so long hoped for—when his country will become the pathway of the world's commerce. Justice, equity and honor were the foundation principles of his character. He died suddenly of heart disease during his official term.

THE OPIUM DEN PICTURES—HOW THEY WERE TAKEN

BY A MEMBER OF THE PARTY

FOR ten years photographers, amateur and professional, have been trying to obtain photographs of the underground opium dens of San Francisco, but without success. The intruders were driven out, their lives threatened, cameras ruined, and it was generally understood that a man took his life in his hands in making such an attempt. THE CALIFORNIAN MAGAZINE proposed to illustrate the following paper in a manner never before attempted; in fact, by photographs taken by flash light in these dens, and on a certain night, a few weeks ago, accomplished its purpose literally by force of numbers, intimidation and diplomacy; the results are herewith submitted, being the first interiors of these dens ever shown or likely to be.

A Chinaman is not violently eager to pose as an object lesson at any time especially when no benefit accrues to himself. He might be induced to sit for his photograph in the robes of a mandarin; but to expect him to give his likeness to posterity, associated with vicious surroundings, clad in tattered garments and with an opium pipe in his hands is a picture from which his mind would recoil with horror. The thought of such a thing would wound John's self-respect, who, after all, looks forward to some better career when transmigration cycles are complete. Realizing the danger and the possibility of getting a stray bullet in the rush that was sure to come, the CALIFORNIAN party was made up with a view to taking the pictures, come what may. The party was led by one of the most skilled and determined detectives in San Francisco, Cris Cox. Others were Mr. H. J. Breuer, then of the Art Department of THE CALIFORNIAN. Frank Davey, the expert photographer of W. Taber's and his assistant Mr. Amsden, with another representative of the MAGAZINE The camera was a large eight by ten instrument, while a flash box, and a plentiful supply of blitz-pulver completed the outfit. In many cases the smokers rushed out or hid themselves before the shot could be taken, and in the dark dens many feet below ground amid yells, oaths, threats and shrieks, often left in complete darkness, the party accomplished its work, one of the pluckiest performances in the cause of "reform" ever made.

The first place visited was on Spofford Alley, in the basement of the headquarters of the notorious Chee Kung Tong Highbinder Society. A dinner was in progress, while a number of Chinamen were smoking opium on the surrounding bunks. The entrance of the party awakened considerable interest. The camera could not be concealed, and the inmates took in the situation at a glance. Everybody rose from the table with indecorous haste, chopsticks were thrown down, and bowls half-filled with rice, chicken and pork, left uneaten. The visitors asked them to proceed with their meal, but every one felt he had eaten enough. The smokers also had risen from their beds and not one could be induced to return. "Me no likee. Mo better you go away. Wha' for you do that thing?" Seeing the artists adjusting the focus, some made a stampede; others were defiant, heaping upon the MAGAZINE party invective and scorn. One indulged in very uncomplimentary speculations upon the ancestry of the visitors, while another made disparaging allusions to their relatives in language that cannot be repeated. Suddenly every light was extinguished

—the curfew order having been given on the supposition that the darkness would frustrate our efforts. All smoking had ceased and it was evident the intruders could not get the pictures they wanted. Preparations were about complete to take a snap at the den when an interruption took place. In the dark some one heard or imagined he heard a rustling sound, and the tread of approaching feet. It was suggestive of trouble. The thought of a flank movement to capture a valuable camera flashed across the artists' excited minds and to save the camera, the signal was given to retreat, a rush was made for the street, the exit being followed by the slamming and bolting of doors, oaths, curses and threats. Here was failure at the very outset. The party, however, soon recovered from its chagrin and resolved to make a better directed assault. The next place visited was in a little *cul de sac* off Jackson Street. They groped their way into a den and drew the smokers into conversation while the artists made their preparations in silence outside. At a signal the door was thrown open and the camera pointed, Detective Cox standing ready to knock down the first aggressor. Muttered imprecations were heard, stifled shouts, and out went the lights. For a second the party hesitated, as each one knew that a knife stroke or a bullet might be received at any moment. Then they rallied, click went the cap, a blinding flash, a dense cloud of smoke, and all was confusion, the party escaping in the cloud of blinding smoke which filled the apartment. This interior is shown in the accompanying photograph. The detective's hat is in the foreground as he held the opium fiends back that rushed for the door, a stupefied smoker starting up with a dazed expression on his face, while other faces appear on the shelves above, startled from their sleep in fear and alarm, shouting "Ay Yah, Ay Yah, Boom sing," and other exclamations at the rolling smoke which covered Mr. Davey's retreat. The Chinamen were dumbfounded and it took some time for them to recover their wits. The last the party saw of this den was a Chinaman, dazed by the flash, groping wildly about and finally running amuck against the wall in his misdirected efforts to find the door.

The next visit was to the subterranean dens where the liberal offer of dollars procured some fine pictures, one Chinaman after considerable haggling consenting to pose for the exorbitant sum of $2.50. This photograph was a great success though it took the poor fellow some time to recover from the shock sufficient to enable him to take hold of the proferred coin. The next place was a veritable pit of squalor. The party approached one of the dens very cautiously and when ready placed the camera close to the door, care being taken not to discover themselves to the garrulous throng of smokers inside. At a given signal Detective Cox went down on hands and knees, pushed open the door and placed his head against the lower part of the door. Quick as a shot the powder flashed, the door swung back. There was a sudden hush, and then rose a roar of excited voices. On all sides had been heard the muffled concussion at which every door flew open, pouring forth on all sides a crowd of bewildered Chinamen who gazed wonderfully upon a cloud of white smoke that rose above the CALIFORNIAN party and covered their retreat.

They next went to a den the keeper of which Detective Cox saluted by name. He raised his head and nodded in recognition. The detective explained the nature of the visit and begged the guests to keep their seats. The sight of a mysterious machine on three legs was not re-assuring. They all looked uneasy, and some, remembering other engagements, hastily retired. The Chinese interpreter of the party made a long explanation in Chinese and after some persuasion Ah Kwai was induced to return to the pipe,

Flash Light Photograph An Underground Den

Smokers starting up, on upper and lower levels, alarmed at the flash light—Smoker with hat on is half stupefied—The hat in the foreground represents Detective Cox who guarded the door while the flash light man and photographer did their work

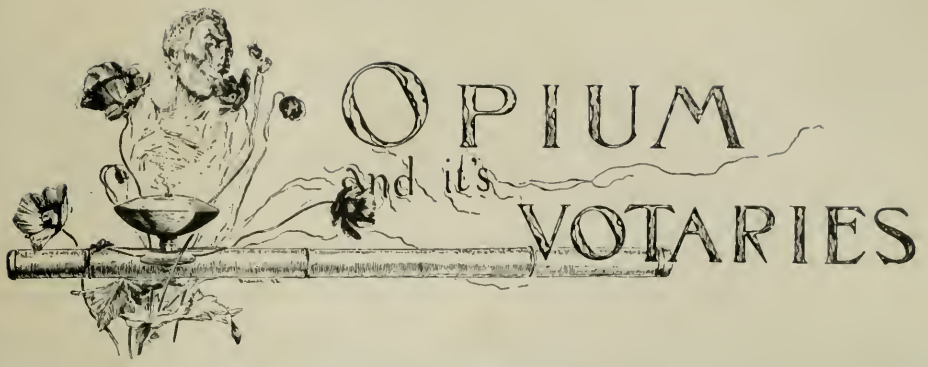
placing himself in an excellent position. The trigger was pulled and off went the flash with an effect such as Ah Kwai had never dreamed of. It took a few minutes for that astonished individual to recover consciousness. A farewell peep at Ah Kwai showed that he had dropped his pipe and was rubbing his eyes, while his companions buried deep in blankets had disappeared from view. A sepulchral voice was heard asking what could have happened and whether Ah Kwai was hurt. "Ah," said the keeper in Chinese, "I suppose the thing busted and killed somebody, and serve 'em right."

The party had hardly got round the corner when Ah Kwai came running after them. He was laboring under evident mental excitement and exclaimed, "This too muchee devil business, must give me money, if only five cent for good luck." A much larger sum was handed to him, which he looked at with incredulity and proceeded to test on the window sill.

The effect of the flash light upon the Chinese at the different places visited was indescribably ludicrous. It was a piece of fireworks that for once completely disturbed John's equipoise. In one place it set fire to some loose paper of a low ceiling; in another it blew out the lights. The blinding glare, the concussion and the pitchy darkness that followed seemed to scare them out of their senses. Some were too terrified to speak; others fearing it the precursor of something worse, cried out "Ay Yah! Ay Yah! save life! save life!" One lad had anticipated their visit to a den, and they found him describing them as "foreign devils with a picture machine that shot out fire like a cannon and a bang that shook the house."

One could not help feeling a twinge of conscience for perpetrating such a practical joke, but the party gathered some excuse from the thought that these were all evil doers who would escape conviction on some technicality in the courts and who in the absence of severer punishment richly deserved the annoyance caused them. Altogether the Magazine party were able to take ten or eleven excellent *photographs which will remain as a monument of one of the most amusing and exciting adventures ever undertaken in San Francisco.

*These pictures are copyrighted by the CALIFORNIAN and Taber. Copies of the large negatives may be obtained from the latter.



BY FREDERICK J. MASTERS, D. D.

Superintendent Methodist Chinese Mission of San Francisco

THE love of narcotics is almost universal. There are few nations, whether civilized or barbarian, that have not sought to excite the imagination or drown care and sorrow by some nepenthe. The Persians and Turks find exhilaration in hemp smoking; the Malays, Pacific Islanders and Anamese chew betel nut; the Chinese seek solace in the lulling fumes of opium, while tobacco is used throughout the civilized world.

Opium, as everybody knows, is the juice extracted from the capsules of the poppy, and is extensively grown in Asiatic Turkey, Persia, India and Western China. In India, the cultivation of the drug is a Government monopoly which brings to the Imperial treasury an annual revenue of upwards of forty millions of dollars. It is in India, where the opium best adapted for smoking, the Patna and the Malwa, is produced. Persian and Turkish opium contain over ten per cent of morphia, have an acrid taste, and cannot be smoked without causing headache and skin eruptions. The West China drug contains only six or seven per cent of the alkaloid, and is steadily improving under cultivation. The Patna opium contains only from three to four per cent of morphia, is of superior flavor and dominates the market. The crude Patna is imported to China in balls of the shape and size of Dutch cheeses. After being marketed in Hong Kong, Macas and other places, it is taken to the factory, where the balls are cut open, the core taken out, boiled, filtered and prepared for the pipe. The Fook Hing Company, in Hong Kong, pays the Colonial Government from two to three hundred thousand dollars every year for the privilege of preparing the drug in that colony. Nearly all the prepared opium imported into the United States comes from their factory. When prepared for smoking, the drug is a dark-looking fluid, about the same color and consistence as molasses, and is put up in five-tael tins, which sell in San Francisco for $8 per tin. This is the kind of stuff that John Chinaman loves as he loves nothing besides. But for this he would rank high as a temperance man. It is true that he drinks a little samshoo and gets red in the face over it, but he never gets drunk. A bottle of brandy can be left in his room for months, and it will not evaporate. As a rule, he detests beer, does not like saloons, but he does like a pipe of opium. When John first learned to smoke the drug, the East India Company, who ought to have had something better to do, undertook to supply his wants. The Chinese Government raised serious objections, uttered threats and issued edicts, but the drug kept coming. At last British traders were seized, their cargoes destroyed and their vessels confiscated. Then came trouble with

England and two disastrous wars, the upshot of which was that China was forced to legalize a traffic that her rulers saw would entail misery and ruin upon her people. The business has long been a National disgrace to Great Britain, but it is so far satisfactory to note that our cousins are becoming ashamed of it, and are making efforts, though tardy, to repair the wrongs of the past. England's ratification of the Chefoo Convention, five or six years ago, now permits China to collect "li-kin," or internal dues on opium, which, added to the regular maritime duties, is likely ere long to cripple the Indian trade. It should also be mentioned that the only merchants in China engaged in the trade are Jews, Parsees and Chinese. But relief came too late; the mischief was allowed to go too far. China is to-day enslaved by chains that no legislation can remove; she grows it in her valleys, and actually pockets a revenue from the maritime trade alone of nearly three millions of dollars every year.

Much might be written of the ruinous effects of opium smoking in China, but that is not the purpose of this article. What need is there to cross the seas for object-lessons that we can find in our very midst? The purpose of this paper is to describe the character and extent of this vice in San Francisco, and to suggest some remedy. We begin by visiting an opium den. Any Chinatown guide will take you to the one about to be

Photographed in China

Opium Smoking in China
A victim in the last stages

described. It is about ten o'clock at night. Turning out of Jackson Street, we enter an alley of execrable squalor, from every basement of which rise the sickly fumes of opium. We come to a doorway, over which is pasted a piece of red paper bearing an inscription in Chinese: "May the five blessings enter at this door." Then descend a crazy stairway, brush past three or four Chinamen crawling out into the light, and land at the bottom in Stygian darkness. We now grope along a narrow passage-way just wide enough for two to pass, then turn to the right, where a few paces bring us to a rickety door. After a rap with a cane, the door is slightly opened. The emaciated and yawning proprietor peers suspiciously round the corner, and lifts his hand in a *procul este profani* attitude. A word or two of Chinese admits us, and the door is closed, and the accompanying illustrations, which are freely described in the previous article, give but a faint idea of the horrors of the den. Nose, eyes and ears soon tell us we are in the presence of the dusky tyrant. The air is sultry and oppressive. A stupefying smoke fills the hovel, through the gloom of which the feeble yellow light of three or four opium lamps struggles hopelessly to penetrate. There are two or three wooden beds covered with matting, and each furnished with lamp and pipe. Three Chinamen lie curled up on the beds, one taking his first puffs, the others in different stages of stupefac-

Flash Light Photograph One of the Worst Underground Dens

Two smokers in an old fire-place, a third on the shelf above, all trying to conceal themselves from the CALIFORNIAN party that rushed in suddenly upon them headed by Detective Cox

tion. The room is about fifteen feet by ten, ceiling and walls black with years of smoke. We had been in this den about five minutes, and no one had spoken a word. It was like being in a sepulcher with the dead. The noise of the street could not reach us there, and nothing could be heard but the sputtering of opium pipes. What a contrast to the glare and glitter of the saloon, or the hilarious shouts and wild frenzy and excited mirth are here. It is a place of shades and sleep and dreams; the hush of the grave, to which, alas, it so often leads.

Everybody knows how opium is smoked. The smoker lies on his side curled up, with his feet resting on a bamboo or earthenware pillow. Before him is a tray containing the necessary appliances. There is an opium lamp of cut glass narrowing at

Flash Light Photograph Underground Opium Den
Smoker caught in the act by the flash light. The keeper in the door had extinguished the lights

drunken orgies of the dive! How different to that smoking of hashish far away in Constantine—that saturnalia of fleshless Arabs sitting under the Adultress' rock, smoking their pipes of hemp, or chanting and swaying their excited bodies to and fro, shrieking to the wild echoes of the chasm! The Chinaman may yell over his drinking game, and curse and swear at the gaming table, but he quiets down in the opium den. No

the top, the rim being on a level with the tip of the flame. There is a pipe aptly called "smoking pistol," being a polished stem of carved bamboo, often mounted with silver, a ring of ivory at the mouthpiece, and a round, earthenware, flat-faced bowl, with a tiny hole in the center. There is a box about the size of a pill-box, made of buffalo horn containing smoking opium, near which lie a number of slender wire pokers, a cup of water

and a sponge to wipe off the bowl after being used. The smoker now takes up the pipe and warms the bowl over the lamp. Using a wire poker, he dips it into the box, taking out as much opium as adheres to the point. He holds this over the flame, being careful not to burn it. The heat makes it swell up to twenty times its original size, till it looks like melted India rubber. The steam that has a state fit to be smoked, it is worked into a conical-shaped ring around the wire. The point of the wire is then inserted into the hole of the bowl and twirled round till the opium becomes detached from the wire and adheres to the pipe, the hole through the center of the bolus connecting with the hole of the bowl. If the opium does not slip clean from the wire, it will have to be roasted and rolled a little longer.

Flash Light Photograph Underground Opium Den
Smoker caught lighting his pipe. Proprietor in the foreground taken by flash light

been generated inside is liberated by rolling the opium upon the flat surface of the bowl. Again, it is held over the flame, roasted for a few seconds and again rolled over the bowl. This operation is tiresomely repeated for a couple of minutes, by which time it is reduced to a soft, solid state by the evaporation of a portion of the water of the extract. When the little bolus has been brought into The stem of the pipe is now applied to the mouth and the bowl held over the lamp, care being taken not to char the opium by contact with the flame. The smoker takes a deep inhalation, and the heat is drawn over the bolus, converting into vapor all the volatilizable material of the bolus, which frizzles and sputters like a candle burning down in its socket. Fifteen seconds have gone, and there is no sign of

smoke. The fumes have evidently gone into the man's lungs, traveling over the respiratory mucous membrane, where the alkaloids cannot fail to be absorbed into the blood. But now the pent-up vapor breaks forth, a dense volume of smoke pours from nose and mouth, the smell of which is enough to turn a horse's stomach. The pipe is empty, the bolus having been smoked in exactly thirty seconds. There is a short pause, the bowl is sponged off, and the smoker takes another dip into the little box, and the same tiresome process is repeated. Four times in succession was that pipe loaded and smoked. At last the box was empty, and twenty cents' worth of opium gone. The victim sinks back, the pipe slips from his hand, and oblivious of everything around him, he drops off to sleep. What is that dismal den to him now? All misery, pain and care are shut beyond his sense. His soul borne on nepenthe fumes is far off in dreamland's Elysian fields. Having been half suffocated and in a vapor bath for twenty minutes, we groped our way back into the street. What a transition, from the poisoned air of that murky den into the chill night breeze and blinding glare of the electric light!

There are many opium-smoking resorts in Chinatown more accessible than the place just described. Ask the guide to show you the way to the house on Jackson Street, derisively called the "Palace Hotel." Go along the passage, down the steps and across the filthy yard. There in front of you are three or four dens. We entered one of these places a few nights ago. There were the same dismal surroundings, the same sallow faces and the same sputtering of opium pipes. For economy of space, the couches were arranged one above the other, (see accompanying illustration) like the bunks in a ship's cabin, and every bed was occupied. Fifteen men were all smoking together, and the smoke was so dense, we could hardly see across the room. A bright, wide-awake-looking young man lying near the door saluted me by name, and was very communicative. He was twenty years old, and had just begun to smoke, having got no farther than three or four pipes a day. He described the nausea, giddiness and headache that resulted from the first pipe. He liked it better now, but would never let his appetite go beyond ten cents' worth a day. Poor fellow! little did he realize the powerful fascination that was creeping over him, and the chains that would one day enslave him. The keeper of the den sat near with an earthenware jar on the table, out of which he was lading

Brass Opium Box

opium and weighing it with a little steel yard called a *ley tang*. It was out of the profit of these sales to the smokers that he ran the den. We talked together in Chinese. He owned up that *excessive* smoking was a bad thing, injurious physically and financially, and that some of his patrons were of that class. When asked how he could carry on a business, which, according to his admission, brought men to ruin, he was not at all disconcerted. His reply was almost identical with that of a local newspaper editor the other day, whose attention had been called to the large space devoted to prize fights and social scandals and other deleterious matter.

"It is the business of you moral reformers," said he, "to improve people's tastes, until then we provide the public with what the public likes." Of the seventeen smokers in the room, only two were of a decidedly emaciated type, and a very dried-up pair of mummies they were. As might be expected, these turned out to be hard smokers, in whom the habit had become deeply engrained. One was forty years of age, had smoked for fifteen years, was getting feebler every year, and was now smoking five dollars' worth every week. He had given up work and depended upon the support of his sons. The other was a dirty-complexioned, bony-faced man of forty-seven years of age, who had smoked for nearly twenty years, had lost appetite for food, needed four dollars' worth of opium every week, and had become prematurely old and infirm. He declared that to break off the habit would mean certain death. The agony endured whenever he had tried to abstain, he compared to a tiger's teeth and claws fastened upon his vitals. He could refrain from the pipe only for a couple of hours, beyond which time he became restless and languid, then utterly prostrated, and in a little time the internal gnawing would begin, which drove him to the pipe. After the first few whiffs, he finds relief, and the pain gives place to the most delightful sensations. Most of the other inmates of the den seemed to be in good health, and were evidently moderate smokers, who smoked not more than twenty-five cents' worth a day. The largest amount of smoking I have ever heard of is by a Buddhist priest in San Francisco. It seems incredible, but he is said to consume $9.00 worth of opium every week. That opium

Flash Light Photograph An Opium Den
Showing double row of smokers, some broke out through the door, others concealed their heads. The lights were blown out as the party entered

smoking is a terrible curse cannot be denied, but is it worse than our National vice of drunkenness?

Comparing its effects with the appalling amount of crime that results from the use of alcoholic liquors I must honestly confess that the balance is slightly in favor of opium smoking. Opium ruins its thousands but strong drink its tens of thousands. Opium does not entail gout and other evils upon posterity as drink does, for to the inveterate smoker all chance of posterity is cut off. Opium does not brutalize and inflame human passions but soothes and finally destroys them. In an opium den one never hears a brawl, or a curse, or sees men fighting like infuriated demons. The smoker does not go outside to "paint the town red," raise pandemonium on the streets and go home to drag his wife out of bed by the hair of her head.

A good deal of exaggeration is found in half we read of the effects of opium smoking on the system. It is a mistake to suppose that when a man begins to smoke the drug, he begins to lose strength and waste away. Opium is no doubt responsible for the widespread misery and destitution seen in many of the poorer districts of China, but the concomitant evils have to be distinguished from the direct effects upon the individual. The great mass of people in China are too poor to smoke the drug without depriving themselves and their families of the common necessaries of life. Very few indeed can afford to smoke anything but a vile adulteration which soon breaks up the constitution. When a man spends in opium the money that is necessary for the support of his family it can easily be imagined what misery and ruin are the result. On the other hand I have seen officials, merchants and others who smoked regularly and suffered little apparent physical injury. Years ago when in South China I made a journey of thirty-five miles in one day borne in a sedan chair by three strong Chinamen who took nothing but opium till they got to their journey's end. They would carry me at a rapid pace for three hours till they came to a town, then dump me down in the crowded market place and deaf to all remonstrance, rush off to an adjoining opium house, have a quarter of an hour's smoke, and start again with lightness and elasticity in their tread. I have had boatmen who have towed, rowed and poled my boat up rapid streams from sunrise till dark on three meals of coarse rice and salt fish, yet every night these hardy fellows retired to the stern of the boat and smoked opium for an hour or two before retiring, maintaining in the face of all my good advice that they could not do their work next day without it. It would appear therefore that used moderately and with proper bodily nourishment opium smoking is a stimulant like strong drink and is not attended by any immediate debilitation or any visible physical infirmity as is generally supposed. This is no doubt the case with the great majority of smokers in California. With good food, comfortably clothed and housed and wages sufficient to procure the best opium we do not so frequently meet with the hollow eye, ashen complexion and enfeebled body usually regarded as the marks of the opium smoker. Yet who will dare to maintain that even a moderate use of the pipe is inocuous or that the fumes of a deadly poison can be taken into the lungs even in small doses, with perfect immunity from disease? There may be no injurious effects to the system visible for the time being but the man is not what he was. He becomes idle, dirty in his person and habits and generally down-at-heels. He loses all capacity for business, and interest in his work. No one in China has any confidence in an opium smoker's word or honesty. If a member of the Christian Church in China persists in smoking even the smallest dose he is expelled. If you discover your domestic servant to be an opium smoker, go and count your spoons at once, and send him off. He

Flash Light Photograph Interior of a Horrible Opium Den Underground
The face of one smoker was caught in the flash. The two others concealed themselves

may only smoke a few pipes a day but the love of the pipe means moral degradation and you can place no more confidence in him.

It is a difficult question to determine how far a smoker can go before he becomes hopelessly enthralled. The Chinese say that a man can break off the habit if he has not smoked long enough to get the yin or craving. When a man gets to that stage he is supposed to be past hope. Home is deserted, business neglected, he spends his days and nights on the opium couch. Month after month he sinks deeper. Appetite for food gives place to an insatiable hunger for opium. The body becomes attenuated, the face dark, the whites of the eyes turn a sickly yellow, the man is a moral and physical wreck. The shackles bind tighter, the craving increases, vitality diminishes. More opium, yet a little more and then comes the long last sleep from which no awakening ever comes. Like a lamp, the oil of which has run low, the wick is repeatedly turned up temporarily quickening the flame but only hastening the final exhaustion of the oil and with it the extinction of the light.

The number of opium smokers in proportion to the population is difficult to estimate. In China the most unbiased and trustworthy opinions give thirty per cent for those who are addicted to the habit and ten per cent of confirmed opium sots. I am inclined to think that the same figures will hold good for the Chinese in San Francisco though Colonel Bee, the Chinese Consul, places the percentage much lower. The Consul says that eight years ago a careful investigation

Photographed in China

Opium Smokers in China
Showing effects

showed only sixteen per cent of smokers and he thinks there has been no increase since. On the other hand well informed Chinese place the percentage as high as forty per cent of smokers and twenty per cent of sots. The truth evidently lies between these two extremes, but what the exact figures are cannot be known. No one however can go among the Chinese without realizing what a terrible hold it has upon that community. There are few stores but what have an office in the rear fitted up with a lounge where some business transaction is closed with a pipe of opium. In factory, store and office you detect the presence of opium. You ascend the stairs of the tenement houses amd meet its fumes issuing from curtained apartments and dark squalid back rooms. A well-to-do home is hardly complete without some luxuriously furnished opium couch where guests are invited to smoke. The fashionable restaurants have their gilded alcoves where the rich guest indulges in the seductive narcotic while near him sits a painted and bedizened belle, twanging the *peypah* or screeching forth some love song.

The most serious phase of the opium evil is that the vice is spreading amongst depraved white people of both sexes. Every day one can meet in Chinatown young men and women of our race whose faces bear the unmistakable marks of the opium sot. One evening I watched a neatly-dressed young woman of about twenty-five years of age pass under a store window on which was pasted a piece of red paper bearing an advertisement in Chinese: "Kung in san tiu," (Patna opium retailed here). She cast furtive glances around, and thinking herself unobserved she stole inside. Stepping quickly forward and peeping round the corner of the window I saw her produce from her jacket pocket a tell-tale little box which the dealer proceeded to weigh and replenish with opium extract. She laid down half a dollar and went away down Kearny street. It should be mentioned to the credit of our police that the visits of white men and girls to opium hells in Chinatown, so often described a few years ago, have now been stopped. A white person convicted of visiting such a place is now sentenced to three months' imprisonment without the option of a fine. During the last six years spent about Chinatown I have failed to discover a single Caucasian in one of these dens, or even suspiciously near one. If done at all it must be very secretly. The movements of white people about Chinatown are so carefully watched, and the different hells under almost half-hourly surveillance, that it would be impossible for them to frequent these places without soon attracting the attention of the police. There is plenty of smoking done by American people, but it is carried on in private houses or in rooms secretly kept by white people. Near the writer's house is one of these haunts. The place is occupied by two dissolute-looking young white women, upon whose besotted faces opium has stamped its indelible brand. The window blind is sometimes raised, revealing a revolting scene. From the window of my house I can see a bed, an opium tray and a lamp. The light falls upon the faces of a young man and a young woman reclining near, with opium pipes in their hands. How many more such places are to be found in San Francisco who shall say?

The fearful prevalence of opium smoking in California is attested by the enormous quantities of the prepared drug imported or smuggled into San Francisco year by year. From statistics furnished by that ever-courteous official, Deputy Collector Jerome, it appears that during the last eight years there have passed through the customs at San Francisco *four hundred and seventy-seven thousand five-hundred and fifty pounds* of the smoking extract. Collector Phelps, through whose vigilance so much smuggling has been detected, and Collector

Quinn, who is fighting the illicit manufacture of opium, both inform me that fully half the opium extract sold in California has been smuggled in or illicitly prepared in the State. In spite of increasingly heavy duties cannot be less than one hundred and twenty thousand pounds. The statistics given above only cover the past eight years for the reason that it was not till 1884 that the Custom House began to segregate crude and prepared

Flash Light Photograph

Approach to an Underground Den
Chinaman astonished at the flash light

the importation of opium for smoking purposes has averaged sixty thousand pounds annually, while in 1888 it reached nearly one hundred thousand pounds. The total amount of opium used annually for smoking purposes on this side of the Rocky Mountains opium in their tabulated reports. From 1875 to 1883 the "crude" and "prepared" are lumped together and the reports show that in nine years there were imported into San Francisco *eight hundred and sixty-eight thousand eight hundred and eighty-*

five pounds of opium, or *ninety-six thousand five hundred and fourty-four pounds per year*. The figures are unsatisfactory, as they do not show what proportion of the importations was for smoking, though the probability is that nearly all was directly or indirectly for the pipe. The total quantity of prepared and crude opium imported for the last eight years was eight hundred and sixty-four thousand and twenty-one hundred—within a few thousand pounds of being equal to the importations of the previous nine years, when the Chinese population had attained its maximum, and when the duty was only six dollars per pound. In 1883 the duty was raised from six dollars per pound to ten dollars per pound on the smoking extract and one dollar per pound on the crude opium. This continued, with no abatement of the trade till 1889, when, under the McKinley bill, the duty was raised to twelve dollars per pound on all kinds of opium, whether crude or prepared, containing less than nine per cent of morphia, this being the only kind that is fit for smoking purposes. Notwithstanding this heavy duty and the large decrease of the Chinese population under the Exclusion Bill, *sixty-three thousand one hundred and eighty-nine* pounds of prepared opium paid duties last year amounting to over three-quarters of a million of dollars.

There has been of late, especially last year, a marked decrease in the importations of crude opium. This is easily explained. Before the McKinley Bill any one was allowed to cook and prepare opium, the only duty or tax required being the import duty of one dollar per pound of crude material. Since October 1st, 1889, only native Americans can legally manufacture the article, and that only on paying a tax of ten dollars per pound. As yet not a cent has been collected for this purpose, the industry not offering very strong inducements to American capital. To make a salable extract the manufacturer would have to import the best crude Patna, or that which contains the least morphia, and the duty on this is as we have seen twelve dollars per pound. Now it requires two and a half pounds of the best Patna to make one pound of the extract. He has, therefore, to pay thirty dollars duty for material enough to make one pound of the extract. Then he would have to pay ten dollars per pound internal revenue tax on its manufacture, making, altogether, forty dollars dues to the Government for every pound of opium extract prepared here. But the Lai Yuen brand preparation can be imported from Hongkong and placed in the market for eighteen dollars per pound. This heavy taxation, therefore, makes the legal manufacture of the extract in California an impossibility; it enriches the foreign producer and encourages a very extensive illicit manufacture at home. To stop these illicit opium kitchens is almost impossible when it is remembered how simple and inexpensive are the appliances necessary to its manufacture. Check it to-day in one place, it is begun to-morrow in another. Collector Quinn has lately broken up some twenty of these kitchens in San Francisco, each with a capacity to defraud the Government of over one hundred dollars per day, and yet each place could be started again to-morrow with appliances that need not cost more than three or four dollars per kitchen. A few months ago a shanty was discovered in the midst of an impenetrable thicket on the American river where was found a complete set of appliances for cooking opium. Similar hovels have been discovered in out-of-the-way nooks at Redding, Red Bluff and other places.

In addition to the heavy duties and taxes levied upon the trade by the Federal authorities, we must not forget the restrictions upon the sale and use of the drug imposed by Municipal ordinances. In 1881, the Board of Supervisors for the City of San Francisco, passed an order declaring it

unlawful under heavy penalties for any person to sell smoking opium without first procuring a license, the sum paid being determined by the amount of business transacted, one hundred and fifty dollars per quarter for a business of five thousand dollars, one hundred dollars for a business worth three thousand dollars, and fifty dollars for sales less than three thousand dollars per quarter. The Municipal authorities having licensed the sale of the drug, and derived a revenue. Perhaps some lawyer can be found to harmonize these conflicting ordinances and tell us how the city can enforce the 1889 law, and yet license the sale of opium. There ought to be no ambiguity about the general order passed by the Municipality in 1880. Section sixty-one declares that any person keeping or visiting a house or room where opium is smoked shall be punished by a fine of not less than two hundred and fifty dollars or three months' imprisonment. One can

Photographed in China

Chinese Boy in Opium Den
Showing the pipe, lamp, etc.

revenue from the trade for eight years, passed another ordinance in 1889, making it illegal to sell any extract of opium except upon a written order of a practicing physician, and requiring that the amounts sold, with the name, sex, color and residence of the purchaser, and the name of the prescribing physician, be entered in a book. The City Council thus passes an ordinance practically declaring a business illegal which it has already legalized and from which it is not ashamed to draw a hardly credit the existence of such a law in view of the crowded opium dens in the basements of Chinatown, yet we are told that the difficulty of proving a den to be other than a private room makes it almost impossible to convict under this ordinance. It is true that numbers of arrests and convictions take place every year, but the evil remains unchecked. The fact is, with all our duties, taxes, licenses, and restrictions, nothing has been done to abate this awful curse, or root out

this cancerous growth in the heart of our city. We fill our general order books with vague, absurd and conflicting ordinances that soon become a dead letter. We legalize the importation and sale of a deleterious article, and then we try to restrict its use. We may as well legislate to restrict the tides of the bay. There is only one way to deal with this evil and that is the plan proposed by the better class of Chinese several years ago, namely, to shut our gates against it, remove it from the tariff, declare the opium extract contraband, and authorize officers of the law to confiscate and destroy it wherever found. Whatever may be said for crude opium and the medicinal uses to which it may be applied, the traffic in prepared opium, carried on at this port, is utterly indefensible and disgracefully wicked. Here is a preparation that can have no earthly use but to ruin men morally and physically; and yet it is legalized by our traffic laws. It is brought over in American ships, imported only by American merchants, and can be legally manufactured in this country only by our people. For the last thirty years, from pulpit, platform, and press, we have been thundering forth denunciations against Great Britain for importing crude opium into China and deriving a revenue therefrom, which some have called a revenue of blood, and yet during the last eight years we have been importing, at this port alone, half a million pounds of opium, prepared only for smoking purposes and which have brought to our National Treasury a revenue drawn from human vice amounting to *five millions of dollars*. Yet this is only for the last eight years, and this a period, it will be observed, marked by the exaction of heavy import duties and added to this a steadily decreasing Chinese population.

It is a very shocking state of things for which no excuse has ever been offered. England tries to extenuate her protection of the opium trade with China by the plea that the accruing revenue is necessary to the maintenance of her Indian Empire. It is a very poor excuse but a better one than we can offer for our trade in a lethal drug that has already become a craving amongst thousands of our own people. With our National vaults running over with accumulated wealth, what business have we deriving a revenue from human vice and human misery? Is there not already enough vice and crime in this country without adding another curse to enthral the bodies and souls of weak, struggling men and women? Have not moral reformers enough to do in combating the hydra-headed monster of strong drink, or the Minotaur of Lust without having to do battle with the demon, opium? There is no time to lose. It is generally admitted that the difficulty of suppressing or even restricting the liquor traffic lies in the immense capital and powerful interests combined to resist reform. In dealing with the opium trade our legislators will not be embarrassed by any such difficulties. If we begin at once, the evil can be uprooted before it gathers strength to resist, but if we wait till its roots have laid hold upon American capital, or till our people have become enthralled in its power, it may be too late. For Heaven's sake, for the sake of the honor of this great country, for the sake of innocent Chinese children, born on our soil and growing up in our midst, for the sake of our own race upon whom the habit is laying hold, let us call upon the Government of this country to prohibit the importation of this poisonous drug, wash its hands of an infamous revenue and a dishonorable trade, and deliver posterity from its curse and shame.

IN PALM VALLEY

BY GEORGE HAMLIN FITCH

THE mention of any new natural wonder of California is apt to cause a derisive smile among those who have heard a great deal about the marvelous things in the Golden State ranging from Yosemite Valley to the Big Trees and from the Geysers to the bottomless lakes of the Sierras. Yet it is safe to predict that five years hence the Eastern tourist will be loath to return to his home without a sight of Palm Springs and Palm Cañon, those unique spots on the fringe of the great Colorado Desert, which have no parallel in this country but which are known only to a small number of people who have braved the forbidding barriers that shut them in from the outside world. The Colorado Desert was exploited last year by the appearance of the singular lake at Salton. It is probable that thousands received their first definite information about this vast stretch of desert from the articles describing the sea that lately occupied the old hollow in the lowest part of this abomination of desolation. It is a land of mystery which no familiarity robs of its impressiveness. Those who have lived for years on the edges of the desert confess that they know as little of its real nature as the sailor knows of the ocean. It is a place to be dreaded in summer as the plague, for the fierce sun beats down so pitilessly on the head of the traveler that he is forced to seek the shade of the mesquite tree until the evening coolness comes. Few prospectors venture along its edge in midsummer and these hardy fellows always go in couples, so that one may lend aid to his companion.

In all other regions of the earth the shade of tree or rock is safety from the burning heat of the sun, but in the Colorado Desert shade is deadly to the over-heated man or beast. The solitary man who remains too long in the sun and then takes refuge in the shade perishes miserably, for his system is unable to rally from the shock. Only brisk rubbing of the body and the extremities will save the sufferer from this fierce desert heat. For miles and miles one may see nothing but the gleaming sand broken by patches of sage brush and dwarf mesquite and walled in on either side by mountains that reveal no verdure and no trees. In places are great moving mountains of the purest white sand which the wind molds into a thousand fantastic shapes. In others, the sand is covered with millions of stones and boulders, like a battle ground of the Titans. Only the long, snake-like curves of the railroad, which follows closely the old Santa Fé trail, and the telegraph poles show that man has penetrated and conquered this desolation.

It is on the edge of this desert that beautiful Palm Valley and picturesque Palm Cañon lie hidden. The great granite wall of the San Jacinto Mountain shuts them off from the desert, while the San Bernardino Mountain and Grayback, 12,000 feet high, separate them from the orange groves of Riverside and Redlands. The little settlement in Palm Valley is clustered about the old hot spring, or Agua Caliente, known to Indians and plainsmen since the first settlement of the country. Through the San Gorgonio Pass, the sea wind from the Pacific shrieks during nine months of the year, and is lost on the great, mysterious desert. The strong wind bears with it the desert sand, and for months Seven Palms, the railroad station which is placed where it re-

The Oldest Inhabitants

ceives the full force of the gale, is the center of a sand storm as violent as any which sweeps across the Sahara. No description can give one an adequate idea of the fury of these sand storms, especially in March and April. No horse can make any head against the wind, and the man who is caught in such a storm feels his way carefully along the railroad track, for to lose this guide would be to perish miserably. All the railroad section hands wear huge goggles and face masks, for the sand is hurled through the air with such force as to penetrate the unprotected skin. These constant volleys of sand have a marvelous effect upon any woodwork. The station building at Seven Palms is very solidly built, and its roof is anchored down by great stones, but the wind sometimes shifts these boulders, and the constant beating of the sand on the sides of the house wears out the softer part of the wood, giving it a worm-eaten appearance. The exposed sides of the telegraph poles are hollowed out as though with an adze, and the poles are renewed every four months. Even the window panes at the end of the station house are converted in a few days into genuine ground glass.

A Desert Home — Palmdale

The traveler who alights from the overland train at night at this station of Seven Palms cannot fancy by any stretch of imagination that within four miles is a fertile valley, where the air is so still at evening that the flame of a lighted candle never flickers. The wind was blowing a lively gale when I grasped my gripsack one

night last autumn and jumped off the train. A friend with a one-horse trap was in waiting. The ride across the desert, in the brilliant moonlight, was a strange experience. The warm wind tugged viciously at the heavy robe which protected our feet, and the swirling sand penetrated every opening in our clothing. The road winds about between huge boulders, and finally, after an hour and a half, we came upon the great mountain wall that is the portal of Palm Valley. Rounding the base of the mountain, we enter upon Palm Valley, which is shut off from the storm-swept desert as though by a closed and barred door. The soft night air has a touch of chill in it—the effect of the water in the irrigating ditches that gleams like silver in the moonlight. We pass cottages in the deep shadow of great cottonwoods, the beds under the verandas indicating that the dwellers adopt the oriental habit of sleeping out-of-doors. Finally, we reach our stopping place, the tired horse is given feed, and in a short time, lulled by the soft gurgle of running water, we are asleep.

In the morning, the sun rests on the great mountain more than an hour before his beams reach the valley. The light leaps from peak to peak, lending a rosy flush to the black cañons and painting the forbidding rocky sides of the mountains with royal gold and purple. Not one hundred yards back of the little settlement of Palm Springs, with its low houses, half hidden by fan palms, figs and cottonwoods, rises San Jacinto Mountain—a sheer rocky wall, perpendicular to the valley and looking as though it had been cut and squared by prehistoric stone-masons. Beyond, to the west, are Grayback and San Bernardino mountains, their tops crested with everlasting snow. In the crystal-clear air, they seem only a

Indian Homes in the Desert

few miles away, while the high, rugged back of the San Jacinto Range appears so near that one fancies he may throw a stone upon it. Through all shades of rose and purple, the arrows of the sun make their way to the awakened valley. They bring out in high relief the stalwart form of the ditch-tender, as he makes his morning round with shovel on shoulder, and they expose some of the domestic economies of the aborigine, whose dusky family lies sprawling outside his wickiup, as full of animal life and as little restrained by clothing as the dogs they play with.

Beginning of Palm Valley

Palm Springs is a mere hamlet, consisting of a low, rambling hotel, a postoffice and a half-dozen houses. It is not more than a quarter of a mile from the rocky wall of San Jacinto, and it owes its name to the remarkable hot spring, known to all pioneers as Agua Caliente. This spring is unparalleled on this coast, and perhaps in the world. Through a central shaft, of the dimensions of an ordinary well, the hot water and sand rise, sometimes spurting high in air like a geyser, but usually merely bubbling over the surface. The water spreads around in a circular pool about six feet by ten, to a depth of three or four inches. The bottom is hard sand until one reaches the shaft. Then the bather sinks with a swift motion, which makes the heart leap. The warm liquid sand closes in around the body, and one goes down to the arm-pits. Then, with a mighty recoil, the limbs are thrown out and the pool once more becomes placid. As one sinks in this bubbling water, there rises before the imagination that awful picture in Hugo's "Les Miserables," of the wretch who per-

ished in the quicksand, of his agony as the sand crept higher and higher, and of the final scene, when only the wild, despairing eyes remained above the waste of treacherous beach. Or, looking upon this strange hot sand, which seems instinct with life and motion, the memory reverts to that ghastly place, the quivering sands in "The Moonstone," in whose depths the weak-willed servant hid the evidence of her master's supposed crime. If one has not been warned of the peculiarity of this spring, he is pretty sure to feel genuine terror until he has solved the mystery of this pool, which plummet has never sounded, nor scientist explained its origin or character. The chemist has shown that it possesses certain properties that make it a sure cure for many blood and skin disorders, but all that you care to know is that the black sand washes you as beautifully clean as the best rubber in a Hammam bath, and that the effect of the hot water is wonderfully exhilarating. There is no trace of relaxation of the muscles, none of the enervating influence that usually follows a hot bath. Instead, this mysterious water, so full of mineral strength, acts as a powerful tonic to the system, and one comes out of the bath feeling as though he had taken several glasses of champagne. The spring lies on Indian land, but it is rented to the proprietor of the hotel. It is practically undeveloped, and only the rudest hut has been placed over it. The Indians still have the right of bathing in it, and they look on its waters as a cure for most of the ills that flesh is heir to in the desert.

White Water River

Next to the spring the greatest natural curiosity in this valley is the grove of palms that is found in Palm Cañon about seven miles distant. The ride to the cañon gives the best idea of the valley and of its curious mountain environment. Starting out from the Springs we pass along by the side of the big ditch which carries the life-giving water to all parts of the valley. To the right is the San Jacinto range of mountains, broken

A Group of Palms in Palm Valley

by two cañons that are marked by grass and cottonwoods growing along the streams that flow out from these rents in the great masses of granite.

On the left the valley melts away into that arm of the Colorado Desert known as the Cahuilla Valley. Most of Palm Valley is still in a state of nature, covered with mesquite trees and weeds, but the few patches that have been redeemed show the remarkable fertility of the soil and the marvelous growth in this dry, warm air. Judge J. G. McCallum, formerly of Los Angeles, may be called the pioneer in this valley. He had over two thousand acres, and he demonstrated that the fig, grape, peach and other fruits can be ripened here fully a fortnight before they are ripe in Vacaville or Newcastle, and that all vegetables mature earlier in this valley than in any other section except favored spots in Arizona. The orange is untried yet, but from two-year-old trees in McCallum's orchard it is safe to say that this favorite southern fruit will flourish.

The lemon appears to endure the dry heat better than the orange, and several trees in the valley cannot be excelled in growth by any trees in Los Angeles County. McCallum is testing many varieties of early peaches and grapes. Some of the trees and vines have already come into bearing and the fruit was sold in the Los Angeles and San Francisco markets for fifty cents a pound.

Dr. Wellwood Murray, one of the best-known horticulturists in California, has carried on experiments in Palm Valley for years, which are of the greatest value to the fruit-grower. With granite from the hills and with Indian labor only, the doctor constructed a cottage hotel, and from a strip of barren sand around it he has evolved an environment of tropical verdure and beauty. He has demonstrated what plants will not grow, as well as those which are fitted for the exceptional conditions of soil and climate in this unique valley. He first proved the wondrous possibilities of San Gorgonio Pass, near Banning, planted its first vineyard and made known by his pen its climatic conditions. The Industrial School for Indian children, begun by Miss Drexel, is now upon the old Murray place. The doctor is an enthusiast upon the subject of developing these fertile fringes of the great desert and he believes this desert valley in a few years will be the chosen home of a large body of invalids and convalescents who will find that its dessicated air arrests disease in all pulmonary complaints, and that the ozone and balsam from the neighboring mountains bring healing to shattered nerves.

Professor Wheaton of Riverside has done much also to make the valley known. He was forced by asthma to seek the dry air of the desert and he found in Palm Valley the ideal atmosphere for which he had longed. He has planted a small vineyard and he induced a number of Boston people of means to improve small places. The most pretentious scheme of improvement is that of the Palmdale Company. It is an orange grove of 160 acres, planted in a part of the valley which is peculiarly exposed to winds from the desert. The trees look fairly well, but they cannot compare with the trees planted elsewhere in smaller groves. What gives the valley a ragged look is that every alternate section is Indian land. A few of the Indians have built houses, planted vineyards and orchards and worked hard to develop their small possessions, but the great majority allow the land to lie idle. The mesquite bean gives them food and they take no more thought of to-morrow than the coyote. Only when the government shall grant them lands in severalty and place them in one district will there be an opportunity to properly develop this valley.

Driving around the edge of the valley one sees that the soil is pulverized granite and sand, washed from the neighboring mountains. Three inches from the surface it is moist and

may be rolled into a ball with the fingers. Where it is irrigated this moisture is more pronounced. It is cultivated with care; in fact, the whole valley is like one great garden bed, free from stones, roots or other inpediments to plow or harrow.

About three miles from Palm Springs, we come to higher ground, where the valley begins to narrow, a great spur of the mountains enclosing it on the east. Here is a tract of fine land, which its owner has called the Garden of Eden. It is an unweeded garden as yet, but it has great possibilities of beauty, for the mountains hold it in their keeping, and from the solitary house, which saves it from desolation, a magnificent view is obtained of the great desert and of the encircling mountain wall that bounds fully one-half the horizon. In this place dwells a young man who was brought into the valley two years ago in a cot, in the last stage of consumption. Then he was a mere skeleton. Now he is a stalwart man, robust and hearty—a living example of the curative effect of this dry, wholesome air. He spends his days in caring for a small orange grove and vineyard, both of which delight the eye with their vivid green in this waste of ashen-hued sand and rock. Beyond the Garden of Eden is an enormous "wash" from the neighboring Andreas Cañon, and when this is passed one comes upon the mountains. It looks as though the rough road would lead you straight up to a mountain wall, but just as you begin to fancy that there is no thoroughfare, the road turns sharply to the left, climbs a rugged hill and then descends into one of the wildest canyons in the State. Huge boulders are heaped in the greatest disorder as though thrown out here by some volcanic convulsion, and after picking your way between them, over a road which is nothing better than a trail, you catch sight of the tufted top of a solitary palm tree. To one who has read De Amicis, the palm always brings visions of his wonderful word painting of Moorish scenes; so, here, amid these barren rocks, with no living thing in sight, save the active lizard, eying you askance, come trooping at the call of memory pictures of Fez, Tangier and Tetuan. A few yards more, the cañyon makes a sharp turn and then there breaks upon the sight a grove of graceful palms, their feet in the water of a mountain stream and their heads in the brilliant sunlight. Their trunks rise to a height of eighty or a hundred feet without a branch and then comes a whorl of drooping fronds with long clusters of pale yellow fruit. About the feet of the palms is a tangle of the common fan palm, young cottonwoods, willows and other swamp growth. The ground is a black muck from deposits of palm leaves, and through it flows a stream that is harsh with alkali. The high walls of the cañon, which is not over one hundred feet wide, shut in this bit of the tropics. Above is the perfect blue, without a speck of cloud, clear and lustrous as the sky of the Mediterranean, and against this the dark red line of the rugged cañyon wall is cut sharp as with the etcher's needle. The trunks of the palms bear traces of fire that has swept through the cañon, but only a few stumps give evidence of the destroying hand of man. In fact, the chief charm of the place is its wildness. You feel that here is a spot remote from the great world, given over to the half-savage dwellers of the desert valley and the coyote of the hills. Only accident revealed it to civilized man, and the years have been too few since he has known it to permit of the deadly work of improvement. This palm grove in which are about fifty trees, is repeated time after time in every new winding of the cañon that continues for five or six miles into the heart of the mountains. The effect of these palms upon one who sees them for the first time is similar to that produced by the big trees of the Mariposa or Calaveras Grove. The imagination is staggered

by the vision of the years that must have passed over these mountain solitudes since these trees were tender saplings. Their age has been estimated by expert botanists at fully five hundred years. Thus they were graceful little twigs, bending to every breeze, when the Pilgrim Fathers landed at Plymouth Rock. These trees are the Washingtonia filifera, and indigenous to this desert valley. Scores of cañons along the edge of the Cahuilla Valley are marked by their crested tops, which may be seen for many miles, gleaming in the sun. The Indians are extremely fond of the dates and late in the Fall parties of them may be seen gathering the fruit that falls to the ground at maturity. The coyote is also partial to the date, and this cowardly animal is regarded as the chief agent in spreading the palm groves in so many of these mountain cañons. The palm seed that falls in the stony places is lost, but whenever it is dropped by the side of running water, it sprouts and grows like the green bay tree.

Two other cañons nearby are well worth a visit. In West Cañon, which is near to Palm Springs, one gets a superb view of the great valley, framed on either side by the gloomy mountain wall. Going further up the cañon, one comes suddenly upon the perfect Tah-quitch waterfall. The cañon walls are at least three hundred feet high, and great boulders jut out, overhanging the narrow cleft below. A mountain spur almost closes the cañon, and through this slit in the solid rock comes a stream of the purest water, which falls in foam to the rocks, one hundred feet below. The lip of the waterfall is a beautifully rounded mass of water-worn granite, the blue seams showing through the polished white stone like the veins on the rounded arms of a woman. The water falls into a deep pool behind a massive boulder, and then comes rushing down between

Palm Springs

huge rocks. The walls of the cañon above are glowing with the midday heat, but here by the plashing waters it is cool and refreshing as the shadow of a great rock in a weary land.

Andreas Cañon, two miles further up the valley, is little known. At its entrance are traces of old Indian dwellings, but further up in the mountains all signs of any habitation are lost. The cañon winds like a huge snake, making the ascent very laborious. We had been told by Dr. Wellwood Murray, who explored this whole region very thoroughly years ago, of a grand waterfall about two and a half miles from the mouth of the cañon. After going what seemed more than this distance, we came upon some lovely palm trees, unblackened by fire. Then in desperation, we struck across several divides to escape the monotonous twisting of the cañon and the wading of the stream. Three high ridges we crossed, only to see a succession of other ridges in front. Finally, we descended the third ridge to the brawling stream that ran through the cañon, determined to end here our quest of the waterfall. We made our way through a tangle of fan palms to the edge of the water, when what was our delight to find that we were on the very lip of the long-sought waterfall. Peering over, we could see the water dashing into spray against the granite sides. We picked our way down the fall to the cañon and reached a spot directly below the fall, which is higher than the Tah-quitch, but not so impressive, as the water flows at an angle of about sixty degrees over the smooth granite. It is caught twice by huge bowlders, and is churned into foam, while at the base of the fall, two immense rocks are piled one on the other, forming a natural cave. The cañon here turns sharply at right angles, so that one who followed its bed might easily pass by the waterfall, fifty feet away.

In the autumn, the mountains about Palm Valley look very desolate, as no trace of green relieves the somber reds and yellows of the masses of rocks. Only the cactus, greasewood and mesquite flourish in these dry and barren wastes. But in the spring, the flora of these mountains is said to be very beautiful. Prospectors who have come in from the mountains bring tales of a magnificent scarlet flower which grows in great luxuriance, and from their descriptions, Prof. Wheaton thinks the blossom must be the scarlet lupine, which is very rare. Another flower is said to glisten like wax, and to be of dazzling whiteness. As the mountains are practically unexplored, they offer an inviting field to the botanist and the geologist. Only the Indians know what is hidden behind these great masses of volcanic rock and in these gloomy cañons. And the Cahuilla Indian, like the Yuma or the Apache, is profoundly suspicious of the white man's intentions. It takes years to secure the confidence of one of these Cahuillas, and even when they have been coddled and made much of, any show of undue curiosity closes their lips at once. They are remarkably superstitious, and to them the solemn mountains are peopled with wild spirits, so that it is the exception when an Indian can be prevailed on to venture into one of these cañons after dark. The mystery of the desert affects alike the scholar and the untutored savage. It is something which cannot be put into words, but it is as real and tangible as the awe which comes over one when out of sight of land on the ocean. It strips away all the gloss of civilization and brings the soul very near to nature. The man who has spent a few months on the desert carries the love of it through life. The fascination of the desert is like that of the South Seas; once fall under its influence, and life elsewhere seems unendurable. So the cañons on the fringe of the Colorado Desert are filled with men who cannot escape the charm of this land of mystery and death.

AT THE NAPA SODA SPRINGS

BY HENRY R. TREVOR

EXTENDING for thirty-five miles between mountainous ranges, terminating at the north with famed St. Helena, which raises its once volcanic crest four thousand four hundred and forty-four feet above the ocean level, Napa Valley spreads its rolling floor, clad in green verdure and veined by living streams. The bold spurs and deep cañons in its boundaries carry grass and flowering shrubs to their summits, while the growing vines of the level plains and the foothills keep the landscape fresh amid surroundings of autumnal gray. Later in the season a broad ocean of ripening grapes purples the air with Tyrian hues.

Agriculture and horticulture rival each other in successful results throughout its fertile soil, while orchard and vineyard alternate their contrasting and brilliant foliage.

On every side, Nature has strewn her bounties and her beauties with a profusely lavish hand. It is perhaps the most prolific section of all this land of milk and honey known as California. There are many vineyards nestling among the foothills that some day will be as famous for their clarets, burgundies or champagnes as the renowned vineyards of Southern Europe. In some of these cool, gray-stone wineries, that one notices every now and then nestling under the lee of some convenient side-hill, are stored hogshead after hogshead of grape juice that is every minute bearing interest in the way of increasing value by age that will decades from now glow blood-red or darkly purple in the long, slim-stemmed glasses at some millionaire's feast; and as his guests praise the wine's incomparable bouquet, the host will sing his California vintage instead of at present claiming a French nativity for an American product.

Quicksilver, iron ore, gold, silver and granite rock fill the hills, while the lava-formed scoria of the mountain sides furnishes a building stone which for strength, durability and beauty is unexcelled.

Another feature of peculiar interest that the valley enjoys and which is a conspicuous advantage bestowed upon her by Nature are the mineral springs, the medicinal qualities of whose waters have a world-wide reputation. First and foremost among the mineral springs of California, and whose waters for thirty-five years past have held the leading place throughout this coast from Alaska to South America, stand the Napa Soda Springs of Napa County. They are situated on the mountain side, one thousand feet above the level of the sea, and about six miles from Napa City. The location is a beautiful one, in the midst of mountain scenery, inviting walks, drives, climbing and continuous out-door life, without hardship or undue exer-

Bird's-Eye View of Napa Soda Springs

tion. Every accessory of woods, rocks, running water, flowers, fruits, brilliant sunshine and magnificent distance is here.

One need not seek health, after a long, debilitating journey across the Atlantic, at a German Spä. Only a few hours' journey by rail from San Francisco, terminating in a very beautiful drive over capital roads, one finds himself in a first-rate hotel, surrounded by every luxury and comfort and in realization that he has an appetite for breakfast—something that he has not experienced for years, maybe—and not only has he an appetite for his matutinal meal, but he finds that he is generally hungry whenever there is anything to eat, about. Added to this, he finds himself sleeping all night long, without a break, and awakening in the morning, like a giant refreshed ready and eager for the day to begin, he has lost that feeling of jaded, weary

The Bellevue

the midst of the most beautiful mountain scenery in America.

There is an exhilaration in the air at this elevation that fills a man, coming weary and worn with overwork, worry or mayhap dissipation to this mecca of health, with that delicious joy at being alive, that only young animals feel, in its fullest sense. After a few days spent here, amid the quiet, restful surroundings, "far from the madding crowd," one awakes some fine morning (to his surprise, not unmixed with pleasure) to the disinclination to effort of any kind, and instead welcomes exertion or effort, either mental or physical.

He lives out of doors, drives, rides, walks, climbs the hills, fishes the streams, botanizes, geologizes — in short, does as he pleases, and all the while the clear mountain air, aided by the wonderfully curative and restorative properties of the springs, is making him young again, and after a month or so, he returns to his work a better man, mentally, physically and morally, than he was before.

The Pagoda Spring

Of all the watering places or public resorts in this State these springs are built up the most solidly and substantially. All the improvements are of stone quarried from the adjacent heights, while the highest artistic taste has been displayed in the erection of all the buildings. They appear as enduring as the hills from which they were carved. No two structures are alike and none are like those elsewhere to be seen. Novelty and architectural beauty seem to have been united to make this the most attractive mountain spa upon the Pacific Coast.

The natural beauties of the situation are unsurpassed. From this position there stretches away for twenty-five miles to the bay, beyond a landscape rich in towering peaks, green vales, sinuous creeks and grain-bearing fields, russet-brown hillsides and fragrant vineyards, surfeiting the eye of the artist who has often endeavored to picture it on canvas.

The valley below resembles an elongated chess-board. Its rectangular fields display all the contrasts of varicolored crops, and the bay in the distance reflects the white-winged sails of commerce. Tamalpais — giant of the Coast Range—presents, in strong contrast, its graceful outline to Diablo's sterner front; and far beyond all these, spreads away the sea, giving the final touch to a landscape unmatched East or West.

The surroundings of the springs themselves are naturally beautiful. Patriarchal oaks, gracefully festooned with gray Spanish moss, or the "dark Druidical mistletoe," mingle with trees of modern growth—the Italian cypress, eucalyptus, madrona and manzanita—giving fullness of shade and a solace from the sunburst.

A Nook in the Garden

Tropical fruits and fragrant flowers engage the eye at every turn—oranges, lemons, olives, figs and pomegranates find here their natural habitat, and all the fruits of the orchard strain the

In the Garden

trees with their plethoric fullness. The lemon verbena and oleander are here no longer bushes, but grow to the commanding proportions of trees, and all aromatic shrubs and flowers find in the balmy climate an inducement to emit in its fullness their grateful fragrance. There are one thousand acres of grounds under the charge of one of the most experienced landscape gardeners in America.

Indian relics, found here in abundance, indicate that this was a chosen spot by the aborigines, and doubtless the Western leather stocking has here, countless times, brushed aside the ferns and quaffed the sparkling current at its fountain. The tradition is well established that the early tribes bore their sick in blankets up the mountain side, and left them at these healing springs, with the sun as their doctor and the waters their specific.

Inviting paths, miles in extent, lead with gentle grade to the various points of interest, now to a grottoed cave and again to a mountain grove; here to a vine-covered bower, and there across a rustic bridge, beneath which, living waters leap and sparkle, and terminate at last at the summit of Castle Peak, beneath whose outlook rolls the whole broad panorama of Napa Valley.

To all of these attractive features is added a climate unexcelled for healthfulness, clearness and brightness, the proportion of sunny to cloudy days being about ten to one, even in winter.

The Club House

The healthfulness of the situation is historically attested by the fact that a Board of Physicians, appointed by the California Legislature, after taking two years to examine into the advantages of every section of this commonwealth for the location of a State Hospital for Consumptives, reported at last in favor of Atlas Peak, a point in the East Napa Range, three miles from Napa Soda Springs.

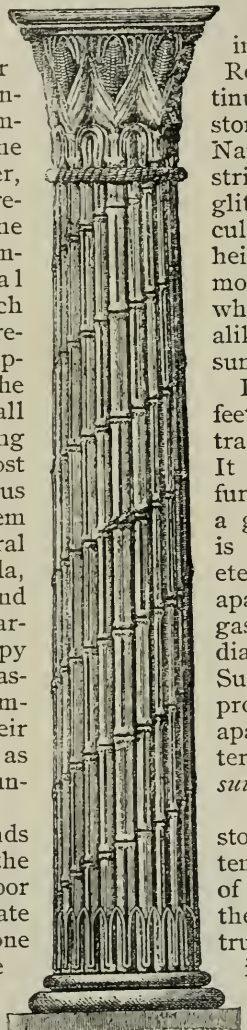
There are twenty-seven springs in

The Stage at the Rotunda

all and their combined flow amounts to four thousand gallons per diem, the waters of the springs have been proven to the complete satisfaction of medical science to contain properties both exhilarative and curative. From one of them is poured forth the article known in the commercial world as Napa Soda. Beneath the mountain is an immense laboratory where, for countless centuries these wonderful waters have been compounded by Nature. The chemicals brought together, united, forming gas and creating pressure, and then the waters so marvelously combined with the medicinal chemicals and gases which give them their wonderful restorative and curative properties, burst forth through the massive rock-bound retort, all ready for the use of suffering humanity. From this most wonderful laboratory flows thus four thousand gallons per diem of this greatest of all mineral waters, mingling iron, soda, magnesia, lime, lithia and muriate of soda, with free carbonic acid gas in such happy combination as to impart pleasure, health and physical improvement as the result of their use. The water is sold just as it flows unadulterated and unchanged.

A beautiful pagoda stands over one of the springs, the solid stone pillars and floor forming a most appropriate setting for the natural stone basin, whence flow the waters. Engraved on a marble tablet over this pagoda spring is the following invocation:

"To suffering man from Nature's genial breast
A boon transcendent ever mayst thou flow;
Blest holy fount; still bid old age to know
Reviving vigor, and if health repressed
Fade in the virgin's cheek, renew its glow
For love and joy; and they that in thy wave
Confiding trust and thankful lave,
Propitious aid, and speed the stranger band,
With health and life renewed, unto their native land."



American Column
Designed by Thomas Jefferson

Among the notable buildings at these Springs, the Rotunda is an object of continuing interest. Built of white stone, it is seen plainly across Napa Valley, and its windows strike the distant beholder as glittering plates of steel. Circular in form, it towers to a height of seventy-five feet, surmounted by a glass cupola, which reflects for many miles alike the rising and the setting sun.

It is one hundred and twenty feet in diameter, and is an attractive work of mechanical art. It is handsomely finished and furnished within, and includes a grand central parlor, which is one hundred feet in diameter, and a most imposing apartment, lighted by a huge gas chandelier, sixteen feet in diameter and of forty lights. Surrounding the parlor is a promenade, and the guests' apartments are arranged exterior to this, single and *en suite*.

The "Bellevue," another stone building of palatial pretensions, has the distinction of having at its front porch the finest specimens of the only truly American columns in existence. They are patterned after a design of Thomas Jefferson, and which in a very humble way, he included in the Capitol at Washington. These pillars are twelve in number, twenty-four feet in height and two feet in diameter. They conventionalize the most sturdy grain product of the North—Indian corn.

Each column represents a cluster of cornstalks, bound together so that the joints of one stalk stand slightly above the preceding one; thus by the recurrence of the joints in the seven divisions of every stalk, a spiral effect is produced. The Capitols represent ears of corn with the half-opened husks displaying the corn which stands out at an angle to the column. As they stand out upon the grandly broad veranda of the "Bellevue," challenging the gaze of the wayfarer for miles, they certainly seem to justify the comment of that European traveler who declared them to be the most beautiful thing he had seen in primitive America. The dining hall is a very beautiful structure of exquisite architectural beauty, and furnished in the best of taste, and without regard to cost; the chef is a *cordon bleu*, and the *table d'hote* is noted all over the world.

Picturesquely arranged on different elevations of the premises are located many other handsome edifices, built of stone and having gas and running water in every room. There is the "Club House," in which are found the bar, billiard tables, bowling alleys, and bagatelle tables, for the use of visitors and guests. The "Tower House," "Ivy House," "Garden House," "Music Hall," "Point Cottage," "Dining Hall," and two "Bottling Houses," have each and all points of architectural beauty and unique interest. The Napa Soda Baths, too, both hot and cold, are most popular, leaving the skin soft and smooth with their lambent purity; the waters feeling, as one enthusiast expressed it, like melted velvet. There are tub baths, plunge baths, and a swimming bath, fifty feet by one hundred and fifty, and varying from four to ten feet in depth.

The analysis of these Alkalo-Chalybeate waters as made by Dr. Winslow Anderson of the University of California in 1889 is as follows:

Temperature 66.9° F.

Mineral Ingredients	U. S. gal. contains Grains
Sodium Chloride	4.72
Sodium Bicarbonate	15.24
Sodium Carbonate	4.65
Sodium Sulphate	.76
Potassium Salts	traces
Magnesium Carbonate	25.19
Magnesium Sulphate	trace
Calcium Carbonate	8.97
Ferrous Carbonate	8.11
Lithium	trace
Boracic Acid	trace
Alumina	.74
Silicates	.83
Organic Matter	trace
Total solids	69.21
Gases	**Cu. inches**
Free Carbonic Acid Gas	95.79

QUESTIONS OF THE DAY.

THE NICARAGUA CANAL

IN the present issue is presented a third article on the Nicaragua Canal from the pen of Captain W. L. Merry, the Consul-General of Nicaragua, and the champion in this State of the cause. The recent convention in this city attracted no little attention to the movement, and there is little doubt but that the enterprise, which means so much for California and the Pacific Slope, will move on. In the history of this State, no question so important has been brought before the people, and as few can be found who doubt the great value it will be, it is somewhat singular that more energy is not displayed on the part of the business community. The question affects every business man and every property holder on this side of the continent, and should be kept before the people in every possible way, until the waters of the Atlantic and Pacific meet.

MOUNTAIN RAILROADS

THE visitor to Switzerland is astonished at the enterprise shown on the part of the builders of mountain railroads, but the secret is, that propositions of this kind pay a large dividend. The road up the famous Rigi and others all pay a large dividend to stock holders, the roads being among the most valuable holdings in the country. We have on this coast scenery as grand, if not grander, than in the Alps, and it is somewhat remarkable that a mountain railroad has not been built before this. Southern California is not wanting in enterprise in this respect, one of her energetic and well-known citizens, Prof. T. S. C. Lowe, of Pasadena, having begun a road which is to take the tourist from the San Gabriel Valley orange groves to the delights of a toboggan slide, all in a forenoon. Prof. Lowe is a shrewd man of business as well as a scientist, and he sees ahead, and we venture the suggestion that five years from to-day, when the Lowe road is carrying its thousands up the mountain, that people will wonder why they were so short-sighted; why they did not see the opportunity and build the road themselves. The possibilities of this road were pointed out in the October CALIFORNIAN, and since then active measures have been taken to insure its early completion, with some little change from the original plan. Professor Lowe is an enthusiast on Pasadena and Southern California, is spending large sums of money there for the public good, and he proposes to show the world something in Pasadena which cannot be obtained elsewhere, viz., an agreeable dip in the Pacific, luncheon in a strawberry patch or orange grove, topped off by an hour on the toboggan slide of Wilson's Peak. This, after the road is completed, will be a very simple thing, as the Sierra Madre Mountains, just back of Pasadena, are 6000 feet in height, and snow covered part of the time in the winter. California is the true land of wonders.

GLACIERS IN AMERICA

IN the present number is published the first of a series of articles on American Glaciers, which will take the reader to some of the most remarkable regions in America, where ice rivers, one thousand feet deep and fifty miles long, reach from the mountains to the sea. Americans who go to Switzerland to look upon the *Mer de Glace*, and are ignorant of these giants in their own land, can have no excuse in the future. What Niagara is to other waterfalls the Muir and other glaciers are to the glaciers of Europe,

far more wonderful and reached by passing through one of the most interesting regions in the world, the famous inland passage to Alaska.

PENSIONING TEACHERS

THE article on pensioning teachers by Mrs. Loud, in the April CALIFORNIAN has attracted wide-spread attention among educators, and THE CALIFORNIAN is in receipt of many communications bearing upon this topic, important to educator and tax-payer. It is interesting to note that teachers are by no means a unit upon this subject. Some looking at the matter from the stand-point of tax-payers, will vigorously oppose it, so that the teachers will not find complete unanimity within their ranks. At an early day the CALIFORNIAN will publish a paper embracing the opinions of the teachers of the State in the matter.

THE CHINESE AND RESTRICTION

THE article in the present issue on Opium and its Votaries, is a notable one. It is the most exhaustive paper ever presented upon the subject and shows conclusively that this vice was introduced by the Chinese and that their influence is contaminating the American people. The paper is presented as one of a series to illustrate that the Chinese are not a desirable addition to our population. In short, continued restriction is needed and demanded. That the nation at large takes this view of the case is well illustrated by the letters received by THE CALIFORNIAN from every State in the Union, called out by the articles on the highbinders, woman slavery among the Chinese, and the previous papers by the Rev. F. J. Masters in this series. The House has passed the restriction bill and it is to be hoped that the Senate will look with favor upon it.

A DANGER IN EDUCATION

AT a dinner recently, at which several distinguished thinkers led the conversation, it was suggested that there was such a thing as giving the people too much culture, too much knowledge. "If," said the speaker, "we raise the standard of all our schools, teach every boy and girl by the standards of the rich, endeavor to cultivate and refine them too much, we shall find the fields of labor, the farms and similar branches, deserted. Our country will be peopled by a race too proud, too highly cultivated to till the soil, and as a result we shall starve to death." This is a jocose way of looking at the question, yet there are many thinking men who entertain the same ideas and who believe that refinement and culture as taught in the public schools, is a mistake on the above grounds. The question in point of fact has hardly a serious side. There is no danger of our becoming over refined or over cultivated. As a rule, these characteristics are born and bred, not instilled, into people. Men and women obtain their breeding, as a rule, by birth, and the difference in the intellectual status of the people will always regulate these questions.

THE FUR SEAL

THE present year has been characterized, if not by wars, by rumors of wars. First, we are in danger of an embroilment with Chili, and for the past month the press has been engaged in keeping up the honor of the country in the Bering-Sea matter, which our English cousins profess to believe is simply a matter of politics: in short, that our politicians must have some excuse for twisting the tail of the British lion, and the fur seal is seized upon as a valid excuse. Our English cousins are mistaken. The unanimity in both Houses of Congress on this subject is somewhat remarkable, and the stand taken by President Harrison will be maintained by both parties. The seal rookeries have been pirated by Canadian and other vessels for several years, and despite the fact that the "kill" has been decreased year after year, the herd has been gradually decreasing in numbers. This is wholly due to the fact that the seals, when off shore, are killed by the poachers, who, regardless of consequences, shoot the seals, male and female alike. THE CALIFORNIAN is having a map prepared by an expert, which will show the actual destruction of seals at St. Paul's. The question will now be submitted to arbitration and we believe that the skillful handling of the question by Secretary Blaine will result in the question being decided in favor of American interests.

NEW BOOKS

WALT WHITMAN, a true man, a kindly gentleman, goes with the past chronicles of the month; is dead, and leaves the world at large undecided as to whether he was a genius or merely a crude laborer in the walks of literature. Assuming that the fields of thought and letters are in a transitory stage, that we are evolving towards some unknowable result, it would be ill-advised to judge the dead, as, being an inherent part of the onward throng: he, too, would be incomplete, and to estimate his qualities, his verse, by existing standards would be to do him an injustice. In this light, the fair old man, peace to whom, and rest, might be judged. He was the rugged founder of a new school, in the examples of which genius flitted with a radiance like that of the fire-fly, whose erratic splendors often serve to make the gloom still more profound. It is a curious commentary upon the culture of the times, that opinions should be so at variance on the work of this man. The question has not been in many instances as to quality, but whether it was worthy of serious consideration. In any event, many men and women, considered, as the world goes, good judges of what should stand, fail to see a redeeming quality in productions that to others, equally qualified, seem the very essence of genius of the highest quality. Whitman produced some rare thoughts—clothed them in rugged costumes and launched them grandly, and they float on the stream with others, so crude, that it can scarce be believed that they were conceived by the same mind. If Whitman be judged by to-day, public sentiment will not award him a high rank. True, he was courted by the liberati of all lands, more honored abroad than at home for his works, and was pronounced a genius by men of undoubted standing in the field of letters; but this does not make it so. Our own Howells, a good authority, no better, would school us in the belief that there is something radically wrong in the works of Dickens, and doubtless in his own mind recognizes the supremacy of "A Modern Instance" and others, a belief in which he has a true right, yet few agree with him, despite the authority, and so with Whitman. The recognition he has received has not awarded him a place among the great poets of the day. He does not stand with Longfellow, Whittier, Lowell, and while time may soften the present judgment, it is doubtful if the future will place him upon this plane.

The perceptive faculties of the people of the day are keen. Judgment is quick, and true genius finds immediate appreciation. The life of Whitman was his greatest poem —well rounded—a full measure of self-sacrifice, of good deeds to others.

AMONG THE WRITERS who have made California their home, Adele Gleason, now of Elmira, New York, is rapidly becoming known as a graceful writer of prose. A recent story in "Echoes" of Elmira, shows her to have a rare power. Miss Gleason is best known by her poems, a little volume of which has been issued under the title of "Songs and Verse for Christmas."

SIR EDWIN ARNOLD is a prolific maker of verse, and his productions all receive a hearty greeting from the reading public. His latest book "Potiphar's Wife, and Other Poems," issued by the Scribners', New York, is a delightful picture of a familiar story. The word painting is so vivid, that one is brought face to face with the scenes and situations described. The poem from which the book takes its title is one of the strongest of the author's productions, taking rank with the famous "Light of the World."

SOUTHERN CALIFORNIA need not complain that it is not kept well before the public. Hardly a month goes by but a publication of some kind appears relating to its charms and attractions. The latest and one of the best is "Southern California Climate," by Dr. P. C. Remondino of San Diego, Dr. Remondino is an old resident of San Diego, the President of the Board of Health, and in a position to give an unbiased account of the climatic conditions of this portion of the

continent, and he has produced a most interesting volume, one that will be of extreme value to persons looking westward and desiring authentic data concerning this State. It is generally not understood by people in the East that we have every possible climate here from the snow line to the ocean, and that what will suit one is often injurious to another. This little volume, with its tables of comparative climates, will be of the greatest value to invalids, and we commend it without reserve. Another volume of value is a little brochure on "Pasadena, its Climate and Resources," by Theodore Coleman. The work tells the story of the growth of one of the most beautiful towns in the State, and points out its desirability as a health resort and place of residence, in a manner which carries conviction. Pasadena is probably one of the best known towns in California to Eastern people, and to anyone who is in search of information regarding it, this volume will answer all questions, and if we mistake not, save as a magnet to draw the reader to Los Angeles County.

MESSRS. G. P. PUTMAN'S SONS have begun a new series "The Leaders in Science," in which the lives of the great scientific workers of the day will be treated in a concise and instructive manner. The initial volume is "The Life of Charles Darwin," by Charles Frederick Holder. The author has presented the salient features of the life of the great evolutionist, shown his development from a child to the most vigorous thinker of the age, in simple language, and with a directness that makes the biography of more than ordinary interest. The chapters on evolution are of especial interest and divested as they are of all technicality, the scientist or layman obtains an idea of the great theory of Darwin, which possibly has been somewhat vague before. Prof. Holder evidently considered Darwin the greatest naturalist of his age, and his description of his character will surprise every clergyman who has attacked the great evolutionist. He ascribes to Darwin all the virtues, and paints him as a God-fearing man, of lovable disposition, "a model for all men." The work is designed for young people as well as old. Prof. Holder writes the second of this series, also "The Life of Louis Agassiz," while the third, Humboldt, is being prepared by a professor of Cambridge University, England. Among recent books on the table are "Chas. Darwin, His Life and Works," G. P. Putnam's Sons, N. Y., $1.50.

"Southern California Climate, Dr. P. C. Remondino, F. A. Davis Co., Philadelphia, $1.25.

"Potiphar's Wife," Sir Edwin Arnold, Chas. Scribner's Sons, New York, $1.75.

"Songs and Verses for Christmas," A. A. Gleason, Cupples & Hurd, Boston.

"The Question of Silver," Louis R. Ehrich, G. P. Putnam Sons.

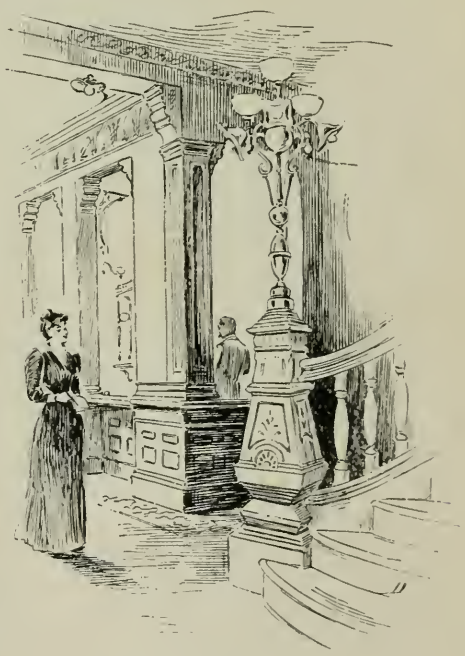
"The Century Dictionary," the Century Co., N. Y.

THE PLEASANTON

BY GEORGE R. STEVENS

THE great hotels of San Francisco are noted the world over, and justly so, too, for in no other city are there to be found hostelries of greater size, more luxuriously appointed or in which the cuisine service, etc., are more nearly perfect. Of late years, however, a new phase of hotel life has found favor amongst a certain class of traveling Americans. It has long been in favor in England, but we, in adapting the idea to suit American tastes, have left but little of the original. I refer to the private or family hotel. Such well-known houses as Morley's and Brown's, in London, have existed for generations, but they are no more to be compared to American private hotels for luxury of appointments or perfection of cuisine service, etc., than an Indian wickiup to Windsor Castle.

The Hotel Pleasanton is perhaps the best example of its class in San Francisco, built as lately as 1886. It has every modern aid to comfort and luxury that unstinted expenditure could command. Owing to our peculiarly moist climate, in order to insure perfect immunity from dampness, its outer walls were necessarily built of wood, but in spite of that, the house is absolutely fireproof. Every wall is doubly lathed and plastered, and between the two courses of plastering there is a heavy asbestos lining ; and at every point where timber touches timber, there is asbestos between, the chimneys are of terra cotta, and do not come in contact with wood or any other inflammable material at any point. In addition to the fact that the house is fireproof, there is every modern appliance for extinguishing fire, should such an improbable contingency arise. There are three stand pipes on the house with hose reels at certain stations on each floor, a house fire brigade, consisting of the male employes, which is put through fire drill every day, under the direction of the engineer. Three wide staircases lead from the garret floor to the street, and nine outside fire escapes provide certain egress. A watchman patrols the house from midnight until



Corridor

six A. M., who, besides registering on his watchman's clock every half hour, is obliged to turn in an alarm from a certain station, on each floor, to the central city office of the American District Telegraph Company, and in addition to all this, there are sixteen city fire plugs on the block on which the hotel stands.

The Pleasanton, San Francisco

Situated on the corner of Sutter and Jones streets, in the neighborhood of "Nob Hill," the Pleasanton is elevated some twelve hundred feet above sea level, free from all malarial influences, and from the upper floors commanding most beautiful marine and landscape views. The Sutter and O'Farrell Street cable systems of street cars pass the doors, providing cheap and rapid transit to the Ferries, Ocean Beach, Cliff House, Park, Railroad Depots or

Corner of Private Breakfast Room

any other point in town or the suburbs. The center of the shopping district and all the theaters are within ten or fifteen minutes' walk of the house, or six minutes by car, and yet there is absolute freedom from the nerve-destroying, never-ending racket inseparable from downtown hotels.

One's impression upon entering the house is of quiet elegance the surroundings are such as one finds in elegant homes; the entrance hall wide, lofty, with carpeted floor, rich rugs lying here and there, the furniture mahogany upholstered in dark leather, the only hotel-like appendages being a small office at one side and a passenger elevator at the end.

The dining-room, breakfast room, main drawing-room and ladies' writing room are on the office floor as are also several suites of apartments.

In the basement are the billiard and card rooms, gentlemen's smoking room buffet and barber shop. The other five floors are devoted to apartments en suite or single.

The main dining-room on the Jones street front of the office floor is a room of imposing dimensions, floored in natural woods, the walls and ceiling handsomely frescoed in panels with a row of fluted pillars in black and gold running down the center of the room. During dinner service the room, lighted by innumerable incandescent lamps shaded in various tints with all its wealth of silver, china, crystal, glass, napery, flowers, etc., presents a most beautiful scene. The service in the dining-room is by colored waiters; the head man having been for eight years head of the Palace Hotel dining-room before coming to the Pleasanton. The breakfast room, opposite the main dining-room is an exceedingly bright cheerful apartment and beyond it are several private dining-rooms and a dining-room for children and nurses.

The main drawing-room at the Leavenworth street side of the hotel is a magnificently proportioned room surprising in its utter lack of the cold depressing stiffness of the ordinary hotel parlor, richly carpeted and furnished, a beautifully carved mantel and tiled grate at one end its wealth of bric-a-brac, pictures, china, curios and the thousand and one other trifles that go to make a room habitable it is almost impossible for one to realize

The Pleasanton—Parlor

The Pleasanton—A Suite

that he is in a hotel and not in a private residence.

The ladies' writing room on the Sutter street front is one of the most charming rooms of its kind to be found anywhere, it is completely equipped with pretty escritoires, tables, bookcases, chairs of all kinds, lounges, a handsome wood mantel and a blazing grate fire makes it a most inviting spot for reading, writing or lounging.

The hotel is under the personal supervision and management of Mrs. Pendleton, whose name is sufficient guarantee of excellence, aided by a staff of clerks, at the head of which is Mr. Briare as assistant manager and Mr. Canisius head clerk. She conducts this immense hotel without any of the bustling, noisy activity so common in most large houses. A certain number of apartments are always reserved for transient guests, and although at certain seasons the house is always full, one can always be sure of finding accommodation.

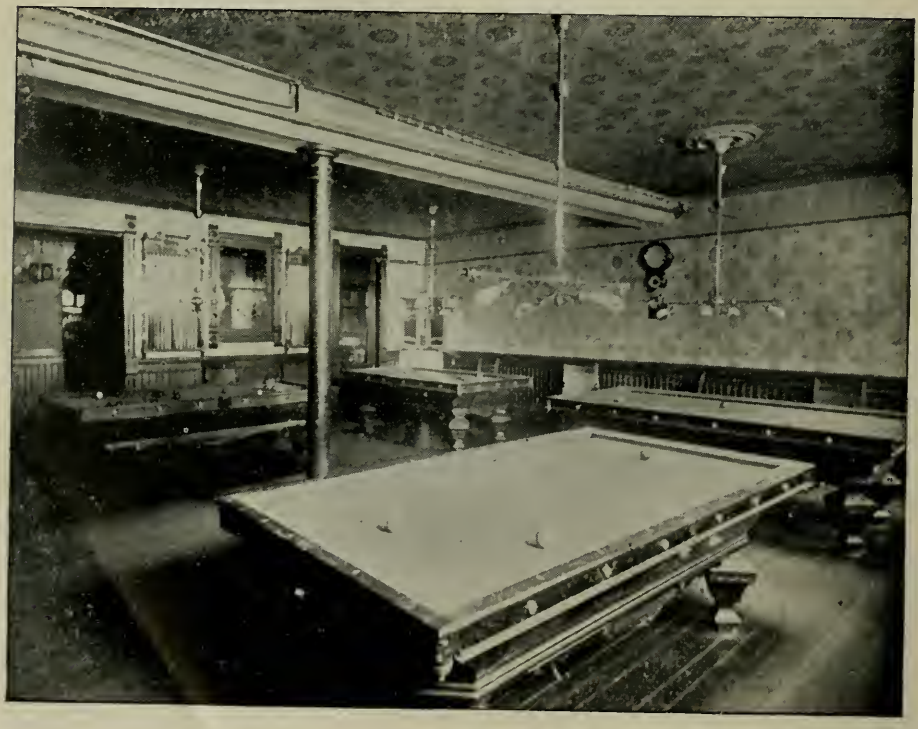
Of the suites and single apartments it is only necessary to say that every one of them is furnished in the same luxuriously home-like style that marks the rest of the house. Every carpet, every chair even was selected by Mrs. Pendleton herself, and it is sufficient to say that the effect upon a weary, worn traveler at finding himself ensconced in one of the warm, home-like rooms at the Pleasanton is to make him, for the nonce at least, forswear traveling altogether and make a permanent home there.

The house is heated throughout with steam, there being a duplicate set of boilers of the very latest pattern. There are bathrooms on every floor at the disposal of guests, in which one finds oceans of *hot* water at any hour, day or night. The system of electric lighting is the latest, and besides having its own dynamos the Pleasanton's electrician has a switch connected with an outside company's system, so that, should anything happen to throw his own dynamo out of order, he can turn the outside company's current on to his own wires in less time than it takes to tell it, thereby providing against any contingent chance of the light in the house being shut off even for a moment.

The cuisine is under the direction of a *chef* who has been at the head of several of the most exclusive restaurants in New York and Paris. The table both as to cuisine and catering, is unsurpassable, and the most *recherche* dinners, luncheons or banquets given in San Francisco usually are given at the Pleasanton. The house indeed makes a specialty of arranging these affairs and also weddings and receptions for those who do not care to be at the trouble themselves, and has

Chamber Mantel

The Pleasanton—Dining Room



The Pleasanton—Billiard Room

made itself a very enviable reputation among the most exclusive society circles in San Francisco.

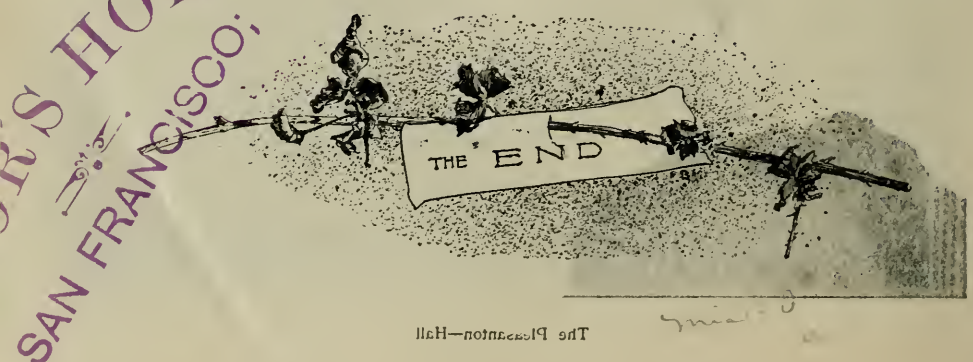
The end aimed at by the management of the Pleasanton is simply to surround its guests with the wholesome quiet refinement of a home, and at the same time leave them that perfect independence of action which is the chiefest charm of hotel life ; and that it has succeeded in this the patronage of the house proves. Here is every possible convenience of hotel life, added to perfect drainage, pure air, an unsurpassed marine and landscape view, easy access to the principal shops and places of amusement, the railroad depots, banks, etc., pleasant surroundings, plenty of sunlight in every room in the house, perfection in cuisine, catering and service, absolute immunity from danger of fire, and last, but decidedly

Corner of Parlor

The Pleasanton—Hall

not least, the quiet privacy which one has heretofore associated only with a home of one's own. One would never imagine upon entering the Pleasanton that he was in a hotel with anywhere from two hundred to two hundred and fifty other guests in it. There is no noisy crowd of people, lounging, smoking, talking, all about the lobby and office; no incessant clang of car gongs and rumble of wheels, and clatter of hoofs on cobbles; from outside none of the rush and worry and publicity of a down-town hotel, but instead a quiet that is refreshing added to the perfection of everything that goes to make material life worth the living.

The Pleasanton—Reading Room



SAN FRANCISCO,

The Pleasanton—Hall